The art of preventing diseases, and restoring health : founded on rational principles, and adapted to persons of every capacity.

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Lucy Foster Carter

THE ART OF PREVENTING DISEASES, AND RESTORING HEALTH,

FOUNDED ON RATIONAL PRINCIPLES,

AND ADAPTED TO

PERSONS OF EVERY CAPACITY.

By GEORGE WALLIS, M. D. S. M. S.

EDITOR OF THE LAST EDITION OF MOTHERBY'S MEDICAL DICTIONARY, AND SYDENHAM'S WORKS, WITH NOTES, &c. &c.

From Fact and Reaſon we our Practice draw,
The firmeſt Baſis, and the ſoundeſt Law,
Whence Nature's powers in fulleſt Vigour riſe,
And dread Diſeaſe with all his Phalanx flies.

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1793.

EXPLANATORY PREFACE.

IN the peruſal of ſeveral works on the prevention and cure of diſeaſe, I have ſeldom met with any that, according to my conceptions, have been formed with ſufficient perſpicuity; for though ſimplicity of ſtile may be eſſentially neceſſary, conſidering the claſs of people to whom ſuch labours are addreſſed; ſtill I ſee no cauſe, why the very principles and reaſoning by which they ought to be directed in their purſuit ſhould either be totally omitted, or treated in ſo ſlight a manner, as not to afford any material advantages—the principles I mean are, the NATURE OF CONSTITUTIONS, and THE IMMEDIATE CAUSES OF DISEASE; for whether we wiſh to prevent or cure, theſe two points muſt ever be kept in view. To prove this, let us iquuire, by what are we directed in our attempts to avoid diſeaſe?

From the knowledge of the remote cauſes, being well acquainted with the effect which they are calculated to produce in the machine, and preventing their acceſſion; but in all caſes this cannot be done; in many, prevention of that circumſtance is impoſſible — how then muſt we act? By ſo regulating the powers of the conſtitution, that it may be placed in ſuch a ſtate as to be rendered incapable of feeling the effect of the remote cauſe.

And how can this be accompliſhed without being thoroughly acquainted with the nature of the conſtitution itſelf? Indeed, it ſeems not only neceſſary in this reſpect, but alſo to render the diſeaſe, when the cauſe has produced its conſequences, as mild as poſſible. Various proofs of the validity of this doctrine will ariſe upon ſlight conſideration. In inoculating for the ſmall-pox, we find very often great variability in the diſeaſe; and this cannot, it is clear, be owing to the matter by which the complaint is occaſioned, having any variability of action; for the ſame matter taken from the very ſame pock will produce in different habits a diſeaſe of very different natures, with reſpect to mildneſs or malignancy—it is therefore obvious the variation muſt ariſe from ſome deviations in the ſeparate habits, which require different modes of preparation;—and, probably, it is owing to want of accuracy in this point that ſome children

after

after being inoculated die, and ſeveral fall into other maladies.

With reſpect to the other principle to which we muſt advert with regard to the cure; we ſhould confine ourſelves to the IMMEDIATE CAUSE or CAUSES, which, acting in the habit, produce thoſe ſymptoms, an enumeration of which is called diſeaſe; for all other cauſes in this point of view are of no avail. Matters it by what means the diſeaſe has been occaſioned, ſince the action of that cauſe is paſt? the effect at this time acting as a cauſe, claims only attention, for that conquered, the diſeaſe vaniſhes. To explain, let us take the Dropſy, —its cauſes have been ſaid to be, "an he-"reditary diſpoſition—drinking ſtrong li-"quors—want of exerciſe—exceſſive evacua-"tions—ſudden ſtoppage of thoſe which are "cuſtomary and neceſſary—large quantities of "cold, weak, watery liquors drank when the "body has been over-heated by violent exerciſe "—a low damp marſhy ſituation—long uſe of "poor watery diet, or viſcous aliment that is "hard of digeſtion.—It is often the effect of other diſeaſes, as jaundice, ſcirrhus of the li-"ver, violent ague of long continuance, looſe-"neſs, dyſentery, an empyema, or conſump-"tion of the lungs—in ſhort, whatever ob-"ſtructs perſpiration, or prevents the blood

" from being duly prepared, may occaſion a " dropſy." Theſe *may* produce this malady, I do not deny, but that not one of them is the immediate cauſe againſt which our remedies are ſolely to be levelled to perform a cure, nor any number of them, except ſuch of which dropſy is only a ſymptom. It is to the effect brought on by theſe cauſes that we are to attend, which I take to be *general relaxation of the ſolids—a thin watery blood—and a weakened action of the abſorbents*, (11.*) by which more water is thrown into the cellular ſyſtem and different cavities by the exhalent, than can be taken up by the abſorbent veſſels.

From the enumeration of the former, not any thing can be collected reſpecting the cure—but from the immediate cauſes every thing, as they plainly point out the indications, viz. to invigorate the ſolids, and increaſe the action of the abſorbent ſyſtem, that the water may be taken from the places wherein it is depoſited, and thrown out of the machine.

It was the defect in theſe particulars that furniſhed one principal reaſon for preſenting this work to the public, in order to ſupply other

* Where the figures are put without the No. theſe refer to the Page—where with the No. or ſucceeding it, to the Preſcriptions in the different forms—and this throughout the work.

informa-

information abſolutely neceſſary, and more eſſentially beneficial. I have therefore been obliged to divide the work into diſtinct heads—the firſt of which comprehends the ANATOMY of thoſe parts in which reſide the active powers of the conſtitution chiefly, with intent to make my reader acquainted with the nature of them, their uſes, connections, and dependencies; that he might have ſome idea of the materials upon which he was to act; as well as be taught what he might expect from them; for to attempt to teach a man the mode of proceeding in any art, without informing him of the nature of the ſubject to which he is to direct his attention, would be like throwing a rough diamond to a glaſs-grinder, he might deſtroy, but never poliſh. Suppoſe a man ſeized with a pain in his bowels, attended with trifling evacuations, he ſees cordials are good in ſome of theſe caſes, and ſlight opiates—he takes them, they give him relief for ſome time—they return more violently, he has recourſe to the ſame remedies, 'till an inflammation comes on—conſidering the intervals of eaſe he has obtained, he has no conception how this can ariſe—let him be informed of the ſtructure and nature of the bowels, he will ſoon underſtand that they are ſubject to irritating cauſes, liable to inflammatory affections; and readily conceive why thoſe irritating cauſes muſt be removed before cordials and

opiates ſhould be taken; which he could never do without ſuch knowledge of the parts. Indeed, I believe for want of this many have fallen ſacrifices.

The parts being ſhewn in their ſimple ſtate, I have next ſpoken of them collectively, ſhewing the nature of different CONSTITUTIONS, which are formed by the combinations of theſe. I conceive this knowledge eſſentially neceſſary towards the preventing of diſeaſe, palliating ſuch as are incurable, and conquering thoſe which lie within the reach of our powers; for there are a variety which require particular attention, in order that full effect may be given to our regimen, and medical treatment; for, without the one is properly adapted to the other, we ſhall not only be foiled in our attempts to cure; but the very means uſed for preſervation from, will be inſtrumental in bringing on diſeaſe, which too frequently proves mortal. This we need not here farther elucidate, as what we have ſaid in the former part of the preface, and in the introduction, render it unneceſſary.

Thus far the parts of the machine to be acted upon have been conſidered. It remains now to ſpeak of thoſe which are the agents, the NON-NATURALS, ſo term'd, and MEDICINAL SUBSTANCES—the firſt of which have called forth my attention, in order to ſhew the great influ-

ence

ence they have on, and how by being properly managed, they contribute to keep the body in a ſtate of health; for it is almoſt ſolely on them that we muſt depend for this purpoſe—for good air—proper aliment, moderate in quantity—ſuitable exerciſe and reſt—with due ſubordination of mental affections, form the beſt plan for our bodily ſecurity—we have therefore endeavoured to ſhew how they act under different circumſtances, and how neceſſary it is to lay down rules with reſpect to them; which, by obſerving, ſupply the moſt pleaſing conſequences—freedom from pain, vigour of mind, and a placid old age; and, by neglecting, the contrary extremes—beſides, we have conſidered ſome of them with reſpect to their powers as medical ſubſtances, and ſhewn how they act, as by theſe means we might afford an opportunity of properly combining the two, that they might aſſiſt in ſtrengthening, and not, by producing contrary effects, counteract each other.

As for medicines, there, perhaps, my reader may conſider me too ſyſtematical, as I have preſerved the terms of the ſchools, and reaſoned too abſtractedly, perhaps, according to his comprehenſion. However, when it is known that I have given the derivation of every term, and explained the powers of each claſs, as commonly conceived, in a manner to render them in this

place

place eaſily intelligible; for the terms themſelves, once underſtood, are infinitely more expreſſive, and involve more ideas than any other which might be thought more familiar, I ſhall, I hope, ſtand excuſed, as well as for dwelling upon the powers which medicines exert; for it appeared not only neceſſary to ſpeak of the good that was likely to accrue from their action, but alſo of the miſchief which they might create, injudiciouſly applied; therefore I was to exhibit them in different views, that it might be known where their exhibition was ſafe, where uncertain, or perhaps detrimental — becauſe a medicine may be proper reſpecting a complaint to be relieved, but its mode of action injurious to the conſtitution—for inſtance, coſtiveneſs is to be removed, if it ſhould be attended with heat and pain in the bowels, ſhewing that in them there is great irritation, and that the blood muſt circulate too freely, the ſtimulant purgatives are improper, (266.)—if there ſhould be coldneſs in them, and the blood circulates uncommonly ſlow and languid, the cooling, (264.) ſhould not be uſed—and if habitual coſtiveneſs be an error of the habit, the aſtringent kind, (265.) ſhould be avoided.

I ſhould be taxed by ſome of my female readers with inhumanity, if the riſing race of infants were forgotten, with whom many have ſaid little

little is to be done.—Take them from the indulgence of fond parents; the vanity, ignorance, neglect, and ſelfiſhneſs of conceited nurſes, I believe very little would be neceſſary; ſave where they, like adults, were liable to be affected with accidental complaints, and then properly nurſed, they would be more readily cured. To the former I can only reply; my animadverſion muſt yield to "who can help it." I lament the misfortune of the infant, and pity the feelings of the parent, whoſe partiality lays the foundation for ten thouſand heart-aches—and to the cuſtoms of the latter, with all their train of poiſons, I oppoſe the plain directions given under the article Nurſing——to the peruſal of which I recommend all mothers, and rational ſuperintendants, and leave it to ſpeak for itſelf; it is uncomplicated, founded upon facts deduced from obſervation and experience, and ſupported by the voice of reaſon.

The parts of which we have here ſpoken form what is neceſſary to be underſtood before any one ſhould enter on the practice of phyſic, as without theſe the adventurers ſail upon the boſom of a dangerous ſea, diveſted of rudder and compaſs. It muſt be ſo clear to common obſervation, that I ſhall conſider it admitted; and proceed to cloſe with the account of the practical part—and here I have laboured to be as ſimple,

and uſefully conciſe, as the nature of ſuch a work would admit.

After ſhewing the tendency of the diſeaſe in general, I have particulariſed the deſcription of each, that is, collected the ſymptoms which have happened, forming its hiſtory; but as the whole of theſe do not always occur, yet ſtill would burthen, from their number, the memory of thoſe who have ſlight knowledge, or are totally uninformed—out of theſe I have ſelected the characteriſtic ſigns, by pointing out ſuch ſymptoms as are agreed always to attend, laying down before the remote and immediate cauſes: becauſe if it appears that the patient has been in the way of the former, it increaſes the probability of his being attacked by the latter, which give origin to the diſeaſe. In this there ſeems to be a peculiar advantage, becauſe the immediate cauſe or cauſes being remembered, leads us fairly to account for a number of the ſymptoms by which the patient may be oppreſſed. This needs no exemplification, on comparing one with the other, it will appear obvious.

With reſpect to the medicinal ſubſtances, a catalogue is given of them claſſed under different heads, with the common doſes annexed, and alſo a variety of formulæ—*in the firſt place*, for the purpoſe of ſupplying a number of materials poſſeſſed of ſimilar powers, though in different degrees, under one head; that the preſcriber might have

have an opportunity of making his own election, and varying them as particular circumſtances might require; beſides empowering him to preſcribe in the moſt ſimple manner—*in the ſecond*, to ſhew the nature of medical compoſition, how and in what forms particular ingredients might be united; and here I muſt obſerve, that the compound medicines I have uſed are chiefly thoſe of the laſt London Diſpenſatory; where they are not, they are particularly ſpecified from whence taken.

There are, alſo, other advantages in this work, which will be to young ſtudents of no little conſequence; for here they will be relieved in their inveſtigation of the real meaning of technical terms, as they are either explained in the body of the work where they occur, and references made in the Index, or in the Index itſelf; and the various articles referred to different places will ſhew them the different powers they poſſeſs, as well as the beſt modes of compoſition—for inſtance—myrrh is referred to 218. 252. 283. 300.—by theſe it will be ſhewn, that it is a ſtimulant—expectorant—emenagogue—and antiſeptic, and the reſt of the numbers following the letter F. will refer the reader to the different forms in which it is preſcribed.

Such, then, my plan, ſuch my reaſons on which I riſque its ſupport.—It is not for me to determine whether it is happily conceived, or

well

well executed. Some things have I borrowed, much altered, and many additions made, wherever I thought it might anſwer any good purpoſes; for my intent was—

To give rational information to thoſe, who, not being properly educated, are obliged to practiſe from neceſſity; declaring, at the ſame time, my wiſh to ſtop the daring hand of inconſiderate raſhneſs, bold from ignorance, and careleſs from contempt of ſocial duty.

To convince thoſe who are led by humanity, or whom inſtinctive whim, too oft miſtaken for that virtue, prompts to viſit the miſerable roofs of ſickly indigence, that ſomething more is neceſſary to conſtitute the medical pilot—to convince them, that in family recipes, and borrowed noſtrums, there is little ſucceſs, and leſs ſecurity — that if ſtimulated by the deſire of doing good, the materials to which they ſhould be limited, lie within a narrow compaſs—warmth—decent cloathing—moderate living—induſtry—and cleanlineſs. — Theſe form the regimen of conſcientious elegance; and are, nine times out of ten, the poor man's beſt preſcriptions—theſe are the powerful cordials—theſe the reſtoratives of a good Samaritan—and with theſe every hoſpitable houſe-wife would be a phyſician ſuperior to an Hippocrates without them.

TABLE

TABLE OF CONTENTS.

SECTION I.

INTRODUCTION, - - *Page* 1

CHAP. I. *On Bones, Cartilages, and other component Parts of the Machine*, - - 7

CHAP. II. *Brain, and other more complex Parts of the Machine*, - - - - 16

SECTION II.

On Conſtitutions, - - - 70

SECTION III.

On the Non-naturals, 84; *with an Account of the Liquids which we in common uſe*, - 109

SECTION IV.

Conſtitutions more particularly ſpecified, - 125

SECTION V.

Neceſſary Cautions reſpecting Food, Exerciſe, &c. 149

SECTION VI.

On Nurſing, - - 167

SECTION VII.

On Medicine, - - - 192

CHAP.

CHAP. I. *Medicines which act on the inert Solids by means of the vital Principle,* - 198
CHAP. II. *Medicines which act upon the living Solids by means of the same Principle,* - 218
CHAP. III. *Medicines which act upon the Fluids through the System,* - - - 284
CHAP. IV. *Medicines which manifest Action chiefly, if not solely, in the first Passages respecting the Fluids,* 293
CHAP. V. *Medicines which produce their Consequences by external Application, or on Substances formed within the Machine, though lodged without the Verge of Circulation,* - - - 302

SECTION VIII.

On Disease in general, - - 313
CHAP. I. *Febrile Affections in general,* - 315
On continued Fevers.—§ 1. *Simple continued.*—§ 2. *Inflammatory.*—§ 3. *Nervous.*—§ 4. *and Putrid, from* 316 *to* 359
Forms of Medicine, - - 359
§ 5. *Mixed fever,* - - 371
instanced in the Puerperal, or Child-bed Fever, 375

SECTION IX.

Remittent Fevers, - - - 387
Bilious, marsh remittent Fever, - 395

SECTION X.

Intermittent Fever, - - - 396

SECTION XI.

Hectic, or chronic remittent, without Crisis, 406

SEC-

SECTION XII.

Eruptive Fevers, - - *from* 411 *to* 467

§ 1. *Small-pox,* 413.—§ 2. *Inoculated Small-pox,* 430.—§ 3. *Meazles,* 438.—§ 4. *Water-pox,* 446.—*Chicken, or Swine-pox, ibid.*—§ 5. *Scarlet Fever,* 449.—§ 6. *Miliary Fever,* 452.—§ 7. *Eryſipelas, or ſerous inflammatory Fever,* 461.—§ 8. *Pemphigus, bullous, or veſiculary Fever,* 467.

SECTION XIII.

CHAP. I. *On Inflammation,* - - 468

CHAP. II. *Inflammations of the Head and Neck,* 488

§ 1. *Inflammation of the Brain,* 488.—§ 2. *Of the Ear,* 493.—§ 3. *Of the Eye,* 495.—§ 4. *Of the Throat,* 501.—§ 5. *Malignant ulcerous Sore Throat,* 508.

CHAP. III. *Inflammation of the Breaſt,* - 511

§ 1. *Pleuriſy, Inflammation of the Pleura,* 511.—§ 2. *Of the Lungs, or Peripneumony,* 517.—*Of the Mediaſtinum—of the Heart—the Membrane ſurrounding the Heart—of the Diaphragm,* 519.—*Malignant Peripneumony,* 520.—1. *Vomica,* 521.—2. *Empyema,* 522.—§ 3. *Pulmonary Conſumption,* 524.—*Tabes,* 527.—*Tabes dorſalis, or dorſal Conſumption,* 531.—§ 4. *Inflammation of the Stomach, or Gaſtritis,* 532.—§ 5. *Of the Inteſtines, or Enteritis,* 535.—§ 6. *Of the Liver, or Hepatitis,* 538.—§ 7. *Of the Spleen, or Splenitis,* 541.—§ 8. *Of the Kidneys, or Nephritis,* 542.—§ 9. *Of the Bladder, or Cyſtitis,* 545.—*Of the Peritoneum, or Peritonitis—Of the Omentum or Caul, or Omentitis,*

titis, 546.—*Of the Meſentery, or Menſenteritis*—*Of the Muſcles of the lower Belly*, 547.

SECTION XIV.

Of Diſeaſes where Pain is the characteriſtic Symptoms, 548

§ 1. *Head-ach, or Cephalalgia, Cephalæa, and Hemicrania*, 549.—§ 2. *Ear-ach, or Otalgia*, 552.—§ 3. *Tooth-ach, or Odontalgia*, 554.—§ 4. *Pains in the Side, or Pleurodyne*, 556.—§ 5. *Pains of the Stomach, or Gaſtrodynia*, 559.—§ 6. *Colic—Colica*, 566.—§ 7. *Nervous Colic*, 571.—§ 8. *Pains of the Liver, or Hepatalgia*, 574.—§ 9. *Pains of the Spleen, or Splenalgia*, 579.—§ 10. *Pain in the Kidneys and Ureters, or Nephralgia—Gravel*, 580.—§ 11. *Stone in the Bladder*, 583.—1. *Suppreſſion of Urine*.—2. *Strangury, or Stranguria*, 584.—3. *Dyſury, or Dyſuria*, 585.—§ 12. *Rheumatiſm, Hip Gout, or Sciatica—Lumbago*, 588.—§ 13. *Gout, or Arthritis*, 594.

SECTION XV.

Morbid Evacuations, - - 606

CHAP. I. *Alvine Evacuations*, - - 608

§ 1. *Cholera Morbus, or bilious vomiting and inteſtinal Flux*, 609.—§ 2. *Dyſentery, or teneſmodal dyſenteric inteſtinal Flux*, 615.—*Hepatirrhœa*, 609. 622. *Leientery, white and black Flux*, 609.—*Diarrhœa*, 608. 622.

CHAP. II. *Hæmorrhages, or ſanguinary Evacuations*, 622

§ 1. *Spitting of Blood, or Hæmoptyſis*, 624.—*Coughing up of Blood*, 623, 624.—§ 3. *Bleeding at the Noſe*,

Noſe, 623. 629.—§ 4. *Vomiting of Blood, or Hæmatameſis*, 623. 630.—§ 5. *Bloody Urine, or Hæmaturia*, 623. 632.—§ 6. *Piles, or Hæmorrhoids*, 623. 634.

CHAP. III. *When the Serum, or lymphatic Part of the Fluids are evacuated in too copious Quantities*, 638

§ 1. *Morbid Diſcharge of Urine, or Diabetes*, 638.—§ 2. *Morbid diſcharge of Sweat, or Ephidroſis*, 641.—*Forms of Medicine*, 644.

SECTION XVI.

CHAP. I. *Active Nervous Affections*, - 655

§ 1. *Tetanus*, 656.—§ 2. *Convulſions*, 661.—§ 3. *Epilepſy, or falling Sickneſs*, 662.

CHAP. II. *Paſſive nervous Affections*, - 669

§ 1. *Apoplexy, or Apoplexia*, 670.—*Carus and Lethargy*, 676.—*Catalepſy*, 677.—§ 2. *Palſy, or Paralyſis*, 680.

SECTION XVII.

Madneſs—Inſania, - - 687

Melancholy, or gloomy Madneſs—Mania, or furious Madneſs, 688.

SECTION XVIII.

Affections of the Lungs, - - 697

§ 1. *Common Cough, or Tuſſis*, 697.—§ 2. *Hooping or convulſive Cough*, 700.—§ 3. *Aſthma*, 706.—§ 4. *Suffocating Catarrh*, 711.—§ 5. *Spurious Peripneumony*, 714.

SEC-

SECTION XIX.

Diſeaſes wherein the Humours of the Machine are particularly concerned, - - 718

§ 1. *Jaundice, or Icterus,* 718.—§ 2. *Dropſy, or Hydrops,* 724.—*Anaſarca, or general Dropſy,* 724, 725.—*Dropſy of the Belly; or Aſcites,* 724, 725.—*Of the Cheſt, or Hydrothorax,* 724. 726.—*Of the Pericardium,* 727.—*Of the Womb, or Hydrometron,* 724. 728.—*Of the Head, or Hydrocephalus,* 724. 734.—§ 3. *Tympany, or Tympanitis,* 740.—§ 4. *Nervous Conſumption, or Atrophy,* 741.—§ 5. *Scurvy, or Scorbutus,* 744.—§ 6. *Scrophula,* 751.—§ 7. *Cancer,* 758.—§ 8. *Clap, or Gonorrhœa virulenta—Pox, or Lues venerea,* 765.

SECTION XX.

Diſeaſes of the Skin, - - 780

§ 1. *Itch,* 781.—*Tetter, or Herpes,* 781.—§ 2. *Scald-head, or Tinea,* 784.—§ 3. *Leproſy,* 785.

SECTION XXI.

§ 1. *Inflammation of the Womb,* 792.—§ 2. *Menſes, Menorrhagia, too copious,* 797.—§ 3. *Whites, or Leucorrhœa,* 799.—§ 4. *Menſes ſuppreſſed, painful, or retained—Amenorrhœa,* 803.—§ 5. *Hyſteric Diſeaſe, or Hyſteria,* 808.—§ 6. *Hypochondriac Diſeaſe, or Hypochondriaſis,* 817.—§ 7. *Hyſteria-hypochondriac Diſeaſe,* 826.—§ 8. *Indigeſtion, called Dyſpepſia,* 829.—§ 9. *Rickets, or Rachitis,* 832.—§ 10. *Dread of Water, or Hydrophobia,* 840.—*Forms of Medicine,* 845.

INTRODUCTION.

SECTION I.

WHEN we reflect on the precariouſneſs of man's exiſtence in this life, the multiplicity of dangers with which he is ſurrounded, even from the firſt moment of his being to his ultimate ſtage; and alſo that the fabric of his machine is ſo formed, that the means neceſſary for its preſervation are ſo many inſtruments wearing out its powers and conducing to diſſolution; and, at the ſame time, conſider, that he is ſubject to an immenſe variety of diſeaſes, which often occaſion him to drag out a life of pain and miſery; nay, frequently cut him off even in the bloom and vigour of his age: it will not appear extraordinary that many men of the firſt, and moſt diſtinguiſhed abilities, have devoted themſelves, not only to the ſtudy of Medicine, in order to cure thoſe maladies, by which man is conſtantly attacked; but alſo prevent their origin, or the miſchiefs which are apt to ſucceed.

From the time of GALEN, who has, upon this laſt ſubject, written moſt elaborately, to the preſent day, we have had various publications, calculated to inſtruct mankind in the Art of preſerving Health, preventing Diſeaſes, or ſhortening their Duration, by the uſe of judicious applications: indeed, of late years, their particular documents have been ſtudiouſly conveyed in ſuch a ſtyle, as to be readily intelligible to common underſtandings; ſo that each man might become, in ſome degree, his own Phyſician. Such laudable undertakings merit the higheſt praiſe, and, if well conducted, promiſe the moſt ſalutary conſequences; for there can be no doubt but the modes of preventing Diſeaſes, ſhortening their Duration, and warding off their evil tendencies by early aſſiſtance, are not only the eaſieſt, but ſafeſt, and moſt pleaſant.—

What has been written on this ſubject may to many, perhaps, appear ſufficient; and ſo it probably might be, were all men's conſtitutions ſimilar: for the methods adviſed by many of thoſe authors, are ſelected with great judgement, and extremely well calculated to anſwer the ends propoſed, under the circumſtance above ſpecified;—but there ſeems to be a very great defect in all the publications which have treated on theſe ſubjects—they give no information to their readers how the variations of conſtitutions are to be diſtinguiſhed, or in what caſes the methods are properly to be altered; and without this, the preſcribing of remedies can be conſidered little leſs than a ſpecies of quackery, by whatever authority it may be ſanctioned.

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The univerſality or generality of any medicine furniſhes the idea of the moſt flagrant abſurdity, ſuitable only to the arrogance of every ignorant impoſtor; and certainly appropriating remedies of the ſame ſpecific nature to one complaint in all conſtitutions, however diſſimilar, is, at leaſt, a branch of the ſame tree; for it is a fact uncontrovertible, ſupported by the ſoundeſt experience--that what may be of great ſervice to one conſtitution, may to another be highly detrimental, though labouring under the ſame affection.

To elucidate this, I ſhall adduce a very familiar example—to many of my readers, perhaps, experimentally comprehenſible; I mean the mode of obviating the effects of INEBRIATION.

Under this circumſtance we will ſuppoſe a man of ſtrong ſtamina—full habit of body—with good digeſtive powers, and a nervous ſyſtem acting with firmneſs and regularity;—and one, of a relaxed conſtitution—not abounding with blood—a weak, delicate ſtomach—and the nerves eaſily irritated—

The advice to alleviate the conſtitutional diſturbances occaſioned by this indiſcretion—is lying in bed, and promoting perſpiration by plentiful dilution, that is, drinking copiouſly of weak tea—ſmall broth—thin gruel—weak white wine or vinegar whey—or ſome ſuch liquors warm, that the ſuperabundance may be evacuated with which the patient has been loaded, and the body ſoaked, *as it is termed*, into its ſober ſtandard. For the robuſt man the advice might be proper—for by the ſurcharge of the vaſcular ſyſtem, and the ſtimulus of the intoxicating liquids, his habit

becomes nearly to aſſume an inflammatory diſpoſition, diſcovered by pain and a ſenſe of fulneſs of the head—redneſs of his eyes—quick ſtrong pulſe—much heat, and great thirſt—which are the general concomitants of ſuch a debauch; and thus he requires abſtinence, evacuation, reſt, and dilution for his alleviation. But the ſame mode, applied to the other, renders all his conſtitutional defects worſe, he experiences the uneaſy ſenſations of languor—ſickneſs—oppreſſed ſpirits—and undeſcribable ſinkings—all increaſed by ſuch a regimen; whoſe good conſequences are derived in the former cure from relaxation and debilitating the ſyſtem. The delicate conſtitutioned man requires freſh air, riding on horſeback, a glaſs or two of generous wine, or ſome cordial, ſuch as will invigorate the powers of his habit—promote vaſcular action—ſtrengthen his ſtomach—increaſe inſenſible perſpiration, and thus conquer thoſe unhappy feelings he labours under from increaſed weakneſs and debility.—Simple as is this fact, and of little conſequence as it may be thought, the ſame peculiarities occur in diſeaſes of the moſt alarming nature; and I am perſuaded that it is from ignorance or inattention in this point, that people are apt to increaſe their maladies, nay often make that, which would, left to itſelf, have been mild, become dangerous by applications not adapted to the particular nature of the conſtitution. For as curing diſeaſes depends on the knowledge of this particular, by which we can more certainly appropriate our remedies to the benefit of the afflicted, ſo doubtleſs muſt it be a more eſſential point in preſerving from, preventing, and

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ſhortening their duration, as in all our endeavours we muſt attempt to keep the conſtitution in, or bring it to a ſtate of health, conſiſtent with the principle of its formation, and the nature of the particular parts of which it is formed—and how can this be accompliſhed without the peculiarities of the conſtitution are known to the perſon applying remedies, or fixing on any regimen?

In order, therefore, to attain this point, as theſe ſheets are addreſſed to the un-informed—it appears unavoidable, to give ſome account of the human machine, with regard to the ſtructure—dependencies and action of its parts, before we enter on the means to be uſed in particular caſes—that every man may be informed of the materials upon which his remedies and regimen are to operate; be able to diſcover their particular ſtate, and hence proceed with ſome degree of regularity and certainty.

Now the human machine conſiſts of SOLIDS and FLUIDS, differently diſpoſed, for the purpoſe of ſupporting each other; ſo that as the parts are worn away or deſtroyed by the neceſſary actions of life, they may be again ſupplied; and this diminution and acceſſion preſerves a conſtant routine, until the animal, agreeable to the laws of nature, is deſtroyed by its own exertions, the machine being rendered incapable of continuing its vital actions; thus, without any preternatural cauſe, gradually deſcends to the grave.

But in order to promote the different purpoſes allotted to the ſolids and fluids for the well-being of the human body, they are variouſly divided.

The SOLIDS into bones—cartilages or griſtles—ligaments—muſcles with their tendons—nerves—veſſels—glands, and membranes.

The FLUIDS—into blood—nervous fluid; perſpirable matter flowing through the ſkin inſenſibly, or in form of ſweat; ſaliva ſeparated by the glands of the mouth and throat; ear-wax; mucus; gaſtric and inteſtinal juices, liquids ſecreted into the ſtomach and bowels;—cyſtic and hepatic biles, ſeparated by the liver, lodged in part in the gall bladder, in part emptied into the firſt bowel called duodenum;—pancreatic juice, or that of the ſweet-bread;—urine, ſemen, liquor of the proſtate gland, and that fluid which moiſtens the internal ſurface of all cavities;—the glary mucilaginous liquid of the joints called ſynovia; tears, mucus of the noſtrils; a white nutritious fluid ſeparated from the food in the inteſtines, called chyle—lymph—fat, and marrow.

It will not be neceſſary to give prolix accounts of the different component parts of the human machine; but only ſuch as may enable our readers ſo far to underſtand the anatomy, as to furniſh ideas ſufficient to aſſiſt them in purſuing the future ſubject with ſome requiſite degree of accuracy.

CHAP.

CHAP. I.

Of the BONES, CARTILAGES, *and other component Parts of the Body.*

THE BONES are the hardeſt, and moſt ſolid parts of the human machine, calculated to ſupport thoſe which are ſoft and leſs firm, in all their motions and preſſures; they are covered with a membrane, or thin bladdery ſubſtance, called perioſteum, on account of its covering the bone, which is exquiſitely ſenſible, being plentifully ſupplied with nerves and blood veſſels. The outſides of bones are commonly more compact than the inner parts; and are formed of plates, joined together by tranſverſe fibres; their inſides are ſpongy and cellular, in which is contained marrow, within membranous bags, filling up the cells; this marrow, being more or leſs diſtributed over all the bones, and tranſuding through their plates and fibres, makes them tougher, and leſs brittle; the bones are ſupplied both within and without, with blood veſſels and nerves.

CARTILAGES or GRISTLES, are ſolid, ſmooth, white, elaſtic ſubſtances, between the hardneſs of a bone and that of a ligament, (*ſee ligament below*) covered with a membrane called perichondrium, becauſe it covers a cartilage, which is akin to the perioſteum of the bones; they ſerve to make the bones, whoſe extremities or ends they cover, move freely in the joints: they limit the growth of bones, as to their length, by hindering the bony fibres from ſprouting

out; and, therefore, when the cartilages in the joints are eroded, an immobility is there formed, called anchyloſis, or ſtiff joint, by the elongation and coalition of the fibres of the bones that are articulated together; ſometimes they ſerve as ligaments to join the bones together, and ſometimes they do the office of bones to greater advantage than theſe would do; as the cartilages of the ribs, which, by their elaſticity, chiefly contribute towards expiration; the cartilages that make out brims of cavities, &c.

LIGAMENTS are white, tough, flexible bodies, thicker and firmer than membranes, and not ſo hard or ſolid as cartilages, without cavity; difficultly ſtretched and with little elaſticity; they ſerve to connect parts together, and keep the part to which they are fixed in a proper ſituation, as appears remarkably in the joints or articulations; they are made up of fibrous layers or ſtrata; the largeſt and ſtrongeſt of which run lengthwiſe.

MUSCLE.—This is the name of the immediate organical inſtrument of motion in the animal body, whether voluntary or involuntary;—it is called organical, becauſe mere elaſticity is the immediate cauſe of ſome motions, as in expiration.*

The general characteriſtic of a muſcle is, to conſiſt of fleſhy fibres which, when acting, contract themſelves,

* The arteries have been ſuppoſed by ſome to contract themſelves after diſtention by this elaſtic power; though they may in ſome degree, yet not totally, for they certainly, and I believe it is generally allowed, act by the contractile power of their muſcular coat, as may be inſtanced in bluſhing—and their ſudden increaſe of action from other local irritating cauſes, and ſome nervous affections.

ſelves, and become ſhorter; this contraction, according to different circumſtances of the muſcle, and the parts to which it is faſtened, produces different effects, and different motions.

If one end of a muſcle is tied to a fixed part, and the other to a moveable one, when it acts, its fibres contracting will pull the moveable part to that which is fixed.

If both the parts, to which the extremities of a muſcle are attached, be moveable, by its action, they will be both drawn towards each other.

If the muſcle be hollow, and contain a fluid, when it contracts, it will preſs upon, and endeavour to expell its contents; ſuch a muſcle as the heart, and in ſome meaſure the ſtomach, and urinary bladder.

If the fibres of a muſcle return upon themſelves, in the form of a ring, when they contract, they will diminiſh the area within that circumference, making the circle narrower. Such muſcles are employed to ſhut cavities, and are called ſphincters, becauſe they have the power of cloſing cavities and reſtraining the exit of any thing they contain.

TENDONS.—Theſe are continuations of fleſhy, muſcular fibres; each tendon being diviſible into as many fibres, or rather bundles of fibres, as the muſcle itſelf is to which it belongs; but the tendinous fibres are more compacted and ſmaller, drier and harder, than the fleſhy fibres; they are not capable of contraction, but ſerve like ropes to pull, when the fleſhy fibres act, for the commodiouſneſs and firmneſs of inſertion, and for the direction of motion.

NERVES.

NERVES.—Theſe are ſoft white cords, proceeding either from the brain or ſpinal marrow, and running to every minute part of the body, and are the immediate inſtruments of ſenſation, and indiſpenſably neceſſary for the continuance of muſcular motion. They are ſuppoſed by many to contain a very ſubtile fluid, but appear without any cavity diſcernible even by the fineſt microſcope.

VESSELS in the machine mean the animal tubes or canals through which fluids or juices move; the leaſt imaginable veſſel is made of the leaſt membrane, rolled up in the form of a hollow cylinder, or part of a cone. The veſſels, as their coats muſt be thicker, are compoſed of thicker membranes, upon which ſmaller veſſels run.

Theſe are divided into ARTERIES, VEINS, ABSORBENTS, SECRETORY veſſels, and EXCRETORY ducts.

ARTERY.—This is the name of that kind of veſſel which, ariſing originally from the heart, contains a fluid whoſe motion is directed from thence towards the extremities and ſurface of the body. The larger and eaſily viſible arteries contain red blood, are of a conical figure—flow, tapering from the heart forwards, and ramifying variouſly; in living animals they beat, or have what is called a pulſe, anſwering to the motion of the heart; their coats look whitiſh, and are pretty thick and ſtrong.

VEINS.—Theſe contain a fluid whoſe motion is from the extremities or ſurface of the body towards the heart; their coats are thinner and more tranſparent than thoſe of the arteries, and, therefore, they appear

of a bluiſh, livid colour, the blood ſhining through them. In many places they have valves within them, which open towards the heart and ſhut the contrary way.

ABSORBENT VESSELS.—So called, becauſe they abſorb or take up fluids, and are divided into LYMPHATICS and LACTEALS, from the particular liquids they convey to other parts—they are ſimilar, only have different origins, and calculated for different purpoſes, from whence they take their names—the former convey the lymph or aqueous fluids, the latter the milky juice, formed from the aliment in the inteſtines called chyle; the lymphatics are the general abſorbents, and carry the juices to what is called the receptaculum chyli, thoracic duct, and left ſubclavian vein—the lacteals to the receptaculum chyli, or receptacle of the chyle.

The *lymphatics* and *lacteals* are very fine veſſels; the former of which ariſe from the ſurface of the body, and all cavities or cells of the cellular membrane; the ſurface of the inteſtines, of the urine and gall bladders, of the ventricles of the brain—and of all other parts, and carry a pellucid liquor towards the receptaculum chyli, and the thoracic duct, in which, like the lacteals, do they all terminate.

SECRETORY VESSELS.—Theſe are all thoſe tubuli or minute tubes, in the different organs, which are adapted for the purpoſes of ſecretion, preſumed to ſeperate and ſtrain off the different humours from the general maſs of fluids.

EXCRETORY VESSELS are thoſe tubes or ducts which alſo belong to the different organs of ſenſation;

tion; whoſe office is to carry off the humours that are ſeperated, and either convey them to their appropriated receptacles, where ſome of them are depoſited, or diſcharge them out of the body.

GLAND denotes in general an organical texture, of a circumſcribed figure, framed ſo as to ſeperate from the blood, a liquid, different from, and unlike the blood; of theſe are various kinds, ſome more ſimple, others more complex or compounded, and are called by the common people, kernel.

MEMBRANE.—This is a web or rather a lamina, or ſlough formed of a very thin ſubſtance, appearing like a bladder, whoſe thickneſs bears a very ſmall proportion to its breadth and length. Moſt, if not all the membranes, we ſee in the animal body, are compoſed of, and reſolvable into thinner ones.

FIBRE is a ſmall thread or filament, without a cavity, at leaſt without one viſible; whoſe breadth and thickneſs bears a very ſmall proportion to its length; the leaſt fibre of all is too minute to be perceived by our ſenſes, however aſſiſted. The fibres we can perceive, are no other than ſo many bundles of ſmaller ones tied together.

Now theſe are the different ſolids of the human machine ſimply conſidered, and being differently diſpoſed and united, by means of the cellular membrane, of which we ſhall ſoon ſpeak, form the human body. This is divided into the LIVING SOLIDS, called *ſolida viva*, and into the INERT SOLIDS, called *ſolida inertia*, which conſtitute the hard parts, and help to complete the cellular ſyſtem.

Theſe are again divided by phyſiologiſts, or thoſe who treat of the human body and teach the uſes of its various parts, into three ſyſtems. The VASCULAR SYSTEM—the NERVOUS SYSTEM—and the CELLULAR SYSTEM.

The FIRST of theſe has the heart for its centre; that is to ſay, all the tubes or canals which are comprehended in this diviſion, either carry fluids out from the heart, or return and convey them to it, and comprehends every ſpecies of *artery*, *vein*, *ſinus*, *duct*, and *abſorbent veſſel*, and may be diſtinguiſhed into *circulatory veſſels*, *excretory veſſels*, and *abſorbents*; veſſels through which the blood circulates—by which particular fluids are ſeperated from it—by which theſe laſt are carried from the place where ſeperated—and by which fluids are taken up, and carried into the machine.

The CIRCULATORY VESSELS include all the arteries, which ſpringing from the *aorta* or large artery of the heart, and that called pulmonary, ſupplying the lungs, carry out the general maſs of blood, and all the veins, which being reflected back, and uniting at the two great ſinuſes of the heart, return it, and thus maintain perpetual circulation.

The *ſecretory*, *excretory veſſels*, and *abſorbents*, we have before explained.

The SECOND or NERVOUS SYSTEM, has the brain as its baſis, from whence iſſue different portions called medulla oblongata, ſpinalis, and nerves. Some affirm that there are two ſets of nerves—the one adapted principally for the purpoſe of perception and ſenſation, be-

beſtowed on the ſeveral organs of ſenſe, internal and external; while the other is blended with the muſcular fibres, becauſe it is obſervable in certain diſeaſes, that the muſcular ſtrength ſhall be totally exhauſted, and yet the powers of perception and ſenſation remain entire; and on the other hand, that the muſcles ſhall ſometimes exert prodigious ſtrength, while the ſenſes are all locked up—hence the authority on which is founded the diſtinction.

But we muſt obſerve, that though all animal motion ſeems to be derived from the nervous ſyſtem, and although the heart, like every other muſcle, can act no longer than the communication through the nerves which are beſtowed on it, remains free; yet there is a neceſſity for diſtinguiſhing between the vaſcular and nervous ſyſtems; becauſe it will appear, when we come to inquire into the nature of diſeaſes, that there may be evident diſorder in the one, while little or none ſhall appear in the other; and this conſideration will greatly influence us in the directions neceſſary to be given for procuring relief.—THESE *form the living ſolids.*

The INERT SOLIDS, not only conſtitute ſuch parts of the body as have neither nerves nor veſſels; viz. the cuticle and its continuations; the nails; the hair; great ſhare of the ſubſtance of bones; cartilages; ligaments; tendons and their membranes; but theſe inert ſolids form the connecting medium, every where between the living ſolids, binding together every minute veſſel and nervous filament; and there are innumerable nerves and veſſels in all parts of the body,

body, except thoſe above mentioned, which no eye can trace; yet, if we reaſon from analogy, and ſay, that the ſmalleſt branches and filaments are like the viſible trunks and cords, then the tranſverſe ſection of theſe muſt be circular; and conſequently, when they come to be interwoven or laid together, they muſt univerſally leave intermediate pores, and minute cavities; hence we may underſtand, that though there may be ſome parts of the body, which have neither nerves nor veſſels, i. e. *no living ſolids*, yet there is no place in the whole fabric to which the cellular ſyſtem does not extend, and where there is not ſome mixture of inert ſolids; beſides uniting and binding together the different ſpecies of veſſels, which either riſe from or terminate at the heart; and all the nervous cords or filaments, which ſpring from the brain or ſpinal marrow, however variouſly they may be combined, diſpoſed, or interwoven; and this fibrous and laminated connecting ſubſtance, is not endowed, like the living ſolids, with either ſenſe of feeling or power of motion.

That the CELLULAR SYSTEM extends itſelf univerſally throughout the whole frame, and has a general and free communication, ſeems fully proved by ſome particular diſeaſes, ſuch as univerſal dropſy, called anaſarca, where water diffuſes itſelf through the whole body; or emphyſema, where air occupies the ſame ſpace, paſſing from pore to pore, and cell to cell; for this membrane conſiſts of a number of little cells, hence its name, which in many parts communicate with each other.

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In the natural and healthy ſtate, the cavities of the cellular ſyſtem, are either filled with a thin fine fluid called lymph, or with oil—hence it is diſtinguiſhed into two parts, the lymphatic and adipoſe, according to the ſubſtances it contains.

The pores, or minute cavities of the lymphatic part, are always to be underſtood as interpoſed between every nervous fibril; whereas the adipoſe cells are not ſo univerſally extended, the fat or animal oil being always lodged in diſtinct bags or veſicles, elſe, was it ſuffered to diffuſe itſelf as freely through the cellular ſyſtem at large, it would be equally diſtreſſing and fatal with the ſpreading of water in an univerſal dropſy, or of elaſtic air in an emphyſema.

CHAP. II.

Of the BRAIN, *and the other more complex Parts of the Machine.*

HAVING now ſhewn the ſolid principles, and the ſyſtems of which the human body, aggregately conſidered, conſiſts, we ſhall take a view of ſome parts which are formed out of theſe, with their fluids and uſes, and give ſuch accounts as may be requiſite for the proper information of our readers, to enable them to diſcover what parts are affected in particular diſeaſes, and diſtinguiſh their nature. We therefore begin with the BRAIN, which is a ſoft, pulpy ſubſtance, ſurrounded by two membranes, one called *dura*, the other

other the *pia mater*—and has alſo a third called *arachnoid*, from its fineneſs, ſimilar to a ſpider's web—the chief peculiarities to be taken notice of for our purpoſes are the SINUSES, which are nothing more than large veins or receptacles for blood, and the VENTRICLES. Like other parts of the body it has a variety of arterial branches coming from the heart, which are diffuſed through its ſubſtance, and on the membranes—from this is derived the whole nerves of the human machine, as the ſpinal marrow is no more than a continuation of the brain through the vertebræ of the back—and this is conſidered the ſource of all perception, ſenſation, and ſupport of muſcular motion.—It is not conſidered in itſelf very ſenſible, but can tranſmit moſt acute ſenſations to every part of the body by means of the nerves, when in a ſtate of health—and moſt violent ones when diſeaſed; there is not the ſmalleſt portion of the living ſolids but is materially connected with it—ſo that it not only gives ſtrong impreſſions to, but feels ſtrong impreſſion from the ſmalleſt portions when affected; and it may be conſidered the fountain of all nervous incitability, by which all the parts dependent upon the nerves are put into motion, or continued capable of perſevering in their action.

And here, as we ſhall often have occaſion to ſpeak of NERVOUS INCITABILITY, and MUSCULAR IRRITABILITY, two powers to which we allow the exiſtence of the machine, in a living ſtate, and the action of all its moving ſolids with reſpect to their continuance, are entirely owing, it will be proper

to deſcribe what we mean by theſe two terms; becauſe they certainly do in ſome degree exiſt independent of each other, notwithſtanding their intimate union, and in general conjunct action—and alſo, as by this knowledge, we ſhall in ſome caſes be able to diſcover, how from particular defect in theſe two powers, ſeperately attended to, diſeaſes put on different appearances—and are to be prevented, alleviated, or cured by our applications made to them diſtinctively as well as unitedly.

By INCITABILITY we mean that power in the brain and nervous ſyſtem, which may be put into action by mental affection, as well as local irritation, and which produces thoſe appearances we call ſympathetic.

By IRRITABILITY we mean that power which may be put into action by material ſtimulus locally exerted—yet is obedient to the influence of the nerves in general—and cannot, in the living machine, exiſt for any conſiderable time without this union.

To elucidate this, we ſhall obſerve that many will be thrown into convulſions by uneaſineſs of mind—we alſo know that the ſame complaint will be occaſioned by ſevere irritation on ſome part or parts of the machine; or that parts themſelves only will, from this ſource, experience ſuch effects—as in cramps. Now as we are totally ignorant how the mind acts upon the brain, and nervous ſyſtem—how theſe act upon the muſcular fibres—nor can we conceive how immateriality, which we take the thinking faculty to be, can act upon materiality, we can by no means make uſe

of

of a term which points out ſpecifically the action of theſe cauſes productive of morbid effects.

In order then either to prevent, alleviate, or cure the complaint from thence ariſing, we preſcribe ſuch things as may amuſe the mind, and keep it free from thoſe painful reflections—and put the body into ſuch a ſtate as to render it leſs ſuſceptible of impreſſions from this ſource.

On the other hand, we advert to the part or parts affected, and by our applications locally directed endeavour to remove the irritative cauſe in order to promote a cure—and with intent to prevent a return, do ſuch things as to render the part or parts incapable of being affected by the cauſe, or put under ſuch circumſtances as to render the acceſſion of that caſe impracticable—hence we think the diſcrimination between the two terms abſolutely neceſſary—as we ſhall in adviſing remedies always pay the ſtricteſt attention to conſtitutional peculiarities.

The LUNGS are ſituated in the cheſt, and there divided into two large portions called LOBES, the one on the right, and the other on the left ſide, which are ſeperated from one another by a tranſverſe membrane called mediaſtinum—dividing the cheſt into two equal ſeperate cavities, that have no communication with one another: but the left lobe of the lungs is conſiderably leſs than the right, becauſe the heart with its membrane, called pericardium, from its ſurrounding the heart, with the great veſſels that open into it, are contained in the left diviſion.—The lungs, beſides their external membrane, and cellular texture of which

they are compoſed, are a congeries of air veſſels from the wind-pipe, which is a firm tube, made up of cartilaginous or griſtly rings, joined together by muſcular fibres—theſe rings backwards are incomplete; this deſcends into the breaſt almoſt to the baſis of the heart, and there divides into two great branches, the one right, and the other left; which again are divided and ſubdivided into leſſer and leſſer ramifications—and ſo diſtributed through all the ſubſtance of the lungs, terminating at length in ſmall membranous, dilutable cells, or veſicles—as well as theſe, there are veſſels which carry blood, and juices derived from the blood; and theſe two kinds of canals are ſo uniformly diſperſed through the lungs, that in every phyſical point there are branches all over—beſides theſe, they are ſupplied with nerves and abſorbents.—Various are the uſes of this organ.

The moſt important is that of *reſpiration*, by which a trajection of blood is effected through their ſubſtance, and circulation completed, in which life conſiſts; by comminuting, condenſing, and rounding its particles, and thereby adapting them to flow through the canals of different ſizes in the body; creating redneſs in its globules—beſides, it has ſeveral uſes which are of the greateſt conſequence to the animal, for by this means the abdominal viſcera are with a continuance alternately preſſed upon, and freed from that compreſſion; by which means concoction in the ſtomach and inteſtines is promoted; and the circulation through the ſyſtem of the vena portarum, or large vein of the liver, which otherwiſe would be too ſluggiſh, is urged

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on. The fæces and urine are expelled by its efforts; ſmelling is performed by inſpiring, or ſnuffing up air; the fœtus is excluded by its aſſiſtance; and ſuction, ſo neceſſary for the preſervation of the new-born animal, is performed—and without it there could be no ſuch thing as voice or ſpeech brought about. Beſides, the lungs are conſidered as the recipient of animal heat, that is, the quantity of atmoſpheric air which ruſhes into the lungs at every inſpiration being loaded with thoſe particles creating heat, they are ſeperated from the air and paſs into the blood, and by their evolution through the courſe of circulation form an univerſal ſtimulus to the vaſcular ſyſtem—and at the ſame time they perform the office of excretion, throwing out ſuch matters which have become uſeleſs, and would be hurtful if continued in the habit.

In the middle of the cheſt between the two lobes of the lungs, rather inclining in its poſition to the left ſide, lies the HEART.—It is a ſtrong hollow muſcle, having two cavities, ſeperated by a ſeptum or diviſion, which are called ventricles, out of which iſſue the two large arteries of the human machine—one called pulmonary artery, becauſe it ſerves the lungs; the other aorta, or large artery of the body;—near the mouths of theſe two ventricles are two other hollow muſcular ſubſtances, from their ſimilitude to dogs ears—called auriculæ—into which the veſſels called vena cava deſcendens, and aſcendens, and pulmonary veins open—the two former into the right, the latter into the left. It is alſo enveloped with a membrane from its ſituation, ſurrounding the heart, called pericardium, by which,

and the large veſſels, it is kept in a fixed poſition—within this membrane there is a ſmall portion of a ſerous fluid.

As we have conſidered the brain to be the ſource of all *incitability*—ſo do we the heart one at leaſt, and that the principal ſource of *irritability*—whoſe chief office is to promote the circulation of the blood—an account of which may not in this place be improper.

But before we enter on that ſubject, we muſt obſerve, that all the arteries of the machine ramify from the aorta, as branches of a tree from its trunk, dividing themſelves into minute ramifications, in which there are no valves, except at the origin; whilſt the veins muſt be looked upon as ſmall branches forming a large trunk, in which there are valves inſerted, which open to the heart. Now in the former of theſe veſſels there is required no ſuch contrivance, becauſe the blood, having a quick progreſſive motion from the contractile power of the heart and arteries, has a ſufficient force impelling it from behind, which prevents its retroceſſion; whilſt, on the other hand, the ſlow motion of the blood in the veins and their weaker contractile power, unaſſiſted with a force adequate to that of the heart, have great need of ſuch an invention to prevent its regurgitation, and ſecure its return to the heart.

Now for a moment let us ſuppoſe, the heart full of blood, that is, the ventricles, have ceaſed to beat, and that it is put into motion by ſome cauſe, what will be the reſult with regard to the circulation? The leſſer circulation through the lungs will be performed

formed in the following manner: the blood will be propelled into the pulmonary artery from the right ventricle, paſs through the lungs, and return to the left auricle by the pulmonary vein; in the ſame manner in the greater circulation it will alſo be forced into the aorta, diffuſed through the reſt of the machine, and return to the right auricle by the vena cava—paſſing through the different glands, in order for them to ſecrete ſuch fluids as they are deſtined for; whilſt, at the ſame time, the capillary or hair like tubes, where there is no ſuch glandular contrivance, will paſs off the matter of perſpiration---the auricles then being filled with blood will contract—eject their contents into each ventricle, and the ſame routine be performed again as above deſcribed.

The particular organs which we have now mentioned muſt be looked upon as the three moſt material ones for the ſupport, and preſervation of life, and the ſources and inſtruments of *incitability*, and *irritability*, by which they perform their actions, and on which all the moving powers of the machine depend—but into the account we muſt alſo take the blood, which, with the lungs, we conſider as the recipient and diffuſer of that fluid or thoſe particles which animate nature—and ſupply an univerſal ſtimulus, which occaſions the action of theſe ſources and inſtruments of vital motions.

The BLOOD is a red homogeneous or apparently uniform fluid, as it circulates in the veſſels, from whence all the other fluids of the human machine are ſecreted, or ſeperated; but when out of the body, and

left to itſelf, diviſible into three diſtinct ſubſtances—*ſerum*, *gluten*, and *red globules*—by a very ſimple proceſs; though untouched, appearing only as two, called *ſerum* and *craſſamentum*, the latter floating in the former; but the craſſamentum is of different degrees of firmneſs in different ſubjects.

The SERUM in an healthy ſtate is almoſt colourleſs; at other times, it is yellowiſh, or perhaps of a greeniſh hue, while the top of the craſſamentum has different degrees of firmneſs, and puts on different appearances with reſpect to colour, according to the age, ſex, and ſtate of health of the ſubject from whence it is taken. The ſerum of the blood, like the white of an egg, coagulates when highly rectified ſpirit of wine, called alchohol, or any of the mineral acids, are mixed with it, or when heated to about 160th degree of Farenheit's thermometer—but otherwiſe it continues in a liquid ſtate.

The CRASSAMENTUM is compoſed of a peculiar ſubſtance, which gives redneſs to the blood, and of, what phyſiologiſts term, coagulable lymph, from its coagulating ſpontaneouſly. This coagulable lymph may be ſeperated from the red part in two ways;—either by ſtirring the blood which is freſh drawn, with a whiſk, when the lymph coagulating in a ſhort time, will adhere to the twigs, and appear like a firm membrane of a whitiſh colour, compoſed of fibres interwoven with each other; or by placing a piece of craſſamentum on a ſtrainer, and pouring on water repeatedly, until the red particles being waſhed away, ſhall leave only the whitiſh ſubſtance behind.

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With regard to the red globules, it is not perfectly agreed of what nature they are—but it is aſſerted that the red colour is owing to a mixture of ſome portion of ferruginous or irony matter—in confirmation of which it may be obſerved, that the blood always becomes florid after a courſe of medicines of that nature; but whether it ariſes chiefly from the addition of ferruginous matter, or owing to the increaſed motion which theſe medicines always produce, will admit of ſome diſpute, for it is always found that the blood grows more red in proportion to the action and the ſtrength of the veſſels—and theſe medicines are allowed to produce ſuch effects.

The proportion of the red part is ſmall in reſpect to the other conſtituent parts, for one grain weight of this colouring matter, will tinge, in a perceptible degree, a thouſand of pure water.

Now as the blood in its healthful ſtate is a tenacious fluid, capable of receiving a greater portion of heating particles in proportion to its tenacity, as it paſſes through the lungs, ſo according to its ſtronger or weaker tenacity will it be capable of retaining more or leſs of theſe ſtimulating particles, thus from this cauſe, will it be more or leſs ſtimulant, and aſſiſt in producing different deviations in the conſtitution—beſides it is from different cauſes liable to undergo many alterations; hence alſo will other differences be formed, of which we ſhall take notice in the ſucceeding pages.

Indeed we might give ſome general practical ideas reſpecting this point; but as many peculiarities ariſe from the ſtate of other organs in the machine, that are worthy

worthy of obſervation, and neceſſarily combined with thoſe already pointed out—we muſt now beg leave to deſcribe them alſo with their uſes—but firſt we ſhall ſay ſomething on—

The THORAX or BREAST.—This is a large cavity, ſomewhat in the ſhape of a cone, reaching from the lower part of the neck to the abdomen or lower belly, from which it is divided by the diaphragm, or midriff. The bones which form this cavity are twelve vertebræ of the back behind,—twelve ribs on each ſide, and the ſternum or breaſt bone before. This cavity is conſiderably ſhorter before than behind, from the diaphragm ſlanting downwards, and backwards. The ribs, which guard the greateſt part of the cavity of the thorax, are all articulated with their reſpective vertebræ, in ſuch a manner as to admit of a motion upwards and downwards; they are all, except the lowermoſt or twelfth rib, connected and articulated with the ſternum, or breaſt bone; by the intervention of cartilages, or griſtles, ſo as to admit of the ſame motion upwards and downwards.

From the ſtructure of the ribs, which are more or leſs arched, being convex outwardly, and concave inwardly towards the cavity of the thorax, it follows, that if the ribs are all moved upwards round their articulation with the vertebræ, their arched middle parts muſt be puſhed outwards and laterally, and the ſternum, to which they are joined, outwards and forwards; and conſequently, the cavity of the thorax will be widened and enlarged.

But there is a ſet of muſcles which perform this office, which are called intercoſtals, from their being ſituated between the ribs, and are both internal and external; they run obliquely from the edges of one rib to thoſe of the ribs neareſt each other, for the whole length of the ribs, and from the higheſt rib to the loweſt: the fibres of the external have a direction contrary to that of the internal, by which contrivance their joint action becomes the more ſteady, and the ribs being pulled in the diagonal of theſe two directions, endeavour to pull the ribs nearer one another; drawing the inferior ribs nearer the ſuperior, and thus the cavity of the thorax is widened, that the lungs may expand themſelves in inſpiration.

But there is another contrivance to promote this purpoſe;—the DIAPHRAGM or MIDRIFF.—This muſcle, which divides the breaſt from the lower belly, ariſes from the breaſt bone before, from all the ribs on each ſide, from the ſeventh to the twelfth; and behind from the laſt vertebræ of the thorax, and the firſt one of the two loins. Its fibres run fleſhy from the circumference to the center ſome way, and then become tendinous; the whole diaphragm ſlants, its anterior origins being remarkably higher than its poſterior ones; it is not plain, but remarkably convex towards the thorax, and concave towards the abdomen; inſomuch, that its middle or center riſes always higher in the thorax than its higheſt origin at the ſternum; when it acts, the fleſhy fibres ſhortening, pulls the tendinous center towards their origin, that is, downwards, thereby rendering it plainer, and leſs

convex,

convex, and ſo lengthening the cavity of the thorax downwards: hence the enlargement of the breaſt is promoted two ways, by the intercoſtal muſcles raiſing the ribs, and making it wider, and the action of the diaphragm rendering it longer or deeper—and by theſe means the ſeveral uſes above ſpecified from the action of reſpiration, is promoted.—See page 20.

Immediately under the diaphragm lies the LIVER. It is of an irregular ſhape—its right part fills almoſt all, what is called the right hypochondre, or ſide under the ribs below the diaphragm, in an adult body, when ſound, reaching commonly no lower than the ſhort ribs. In the fœtus it is bigger, in proportion to the reſt of the body, in all its dimenſions—its middle part lies in the region over the ſtomach, called epigaſtrium; and its left in the upper part of the left hypochondre, not reaching ſo far down as the right; ſome of its exterior parts are ſmooth and convex, humouring the concavity of the diaphragm; its under part is concave on the right ſide, anſwering to the gut called the colon before, and the right kidney behind; its middle part, in which the gall bladder, called the veſica fellis is placed, lies over the gut, called duodenum, which touches the gall bladder; its left part covers the ſtomach—it is thick in the middle, and upper ſubſtance, towards its ſides it grows ſlenderer, at length terminating in a thin edge;—by a furrow in the interior and concave part which receives the umbilical vein, or that of the navel in the fœtus, on its anterior part; and by another anſwering to that backwards reaching to the poſterior limits of the liver,

which receives the venous duct, both which canals are pervious veſſels in the fœtus, but in the grown animal degenerate into ligaments, the liver is divided into two unequal parts called lobes; the right being much larger than the left; there is beſides, a ſmall lobe in its poſterior concave part, commonly called the lobule of Spigelius: there is likewiſe a tranſverſe foſſa, or furrow, running along the middle of its concave, and under part, in ſome meaſure ſeperating its anterior and larger from its poſterior and ſmaller part: it is attached to the diaphragm, and its weight is in ſome meaſure ſupported by ligaments from that muſcle, which are productions from the membrane which lines the inſide of the lower belly called peritonæum, where it lines its concave ſurface, and is united by other ſuch productions, with the neighbouring parts:—it is furniſhed with arteries from ramifications of the aorta, called cœliac, mammary, phrenic, renal, and capſular—but it is furniſhed with veins of two kinds—totally differing from each other, which cannot truly be ſaid of any other part of the body; to wit, the vena portarum, and its branches diſtributed through the ſubſtance of the liver, which perform the office of arteries, carrying blood into it; and the other veins, which carry blood out of it, emptying themſelves into the vena cava, like the reſt, all over the body.

As the reſt of the arteries and veins may be compared to the trunk of a tree with its branches, ſo may the vena portæ and its different ramification, be compared to the root, trunk, and branches—for it is formed by a conflux of all the veins, which return the blood

blood from the ſtomach, omentum, ſpleen, pancreas, inteſtines, and meſentery; and anſwer to the cœliac, and meſenteric, both ſuperior and inferior, arteries.—It is worthy to be obſerved, that all this venous ſyſtem, which by its union conſtitutes the vena portarum is unfurniſhed, unlike the other veins of the body, with valves; ſo that from its trunk it may be injected backwards to the minuteſt origins of ſmall veins, in all the parts juſt now mentioned. The trunk of the vena portarum, thus formed, enters the liver between two eminences in the little lobe, called by the ancients, πολαι, portæ—that is, ridges forming a little channel or ſtreight between them: as ſoon as it is formed into a trunk it is found to have got ſtronger membranes or walls than other veins, and even tougher than the aorta or large artery of the body itſelf. This new and extraordinary ſtrength of the coats of the branches of the vena portarum, they carry with them throughout all the ſubſtance of the liver; and they are diſtributed from trunks to branches, ſmaller and ſmaller, in the ſame manner as arteries are in the other viſcera.

Thus is blood brought into the liver by arteries, called hepatic, of the common ſort; and beſides by the vena portarum, furniſhed with ſtrong coats, and performing the office of an artery, the only inſtance of that kind in the whole body. The ultimate ſmall capillary branches, both of the hepatic arteries, and vena portarum, terminate in minute venous twigs, which ariſing all over the ſubſtance of the liver, and forming larger and larger branches by uniting together, at length open by ſeveral large mouths into the vena

cava

cava about the poſterior, or gibbous part of the liver.

The liver is ſupplied with nerves from the intercoſtal, and par vagum ſo called;—they are but ſmall in proportion to its bulk, and therefore it is not liable to violent pains.

The great uſe of the liver is to ſeperate bile, for many good purpoſes in the animal œconomy; and as it is now and then wanted more at ſome times, than at others, there is in the liver a receptacle for part of this fluid, called the GALL-BLADDER, which is a pretty large hollow veſſel, nearly the ſhape of an oblong pear—ſituated in a fovea or furrow, in the anterior concave part of the right lobe of the liver, reaching tranſverſely from before backwards; attached to the liver in different places by a cellular texture, covered over in its under part, by a portion of the membrane of the liver, which reaching beyond it keeps it faſt in its ſituation. Under this, all over its ſurface, is a cellular texture—next to that, a thin muſcular coat, conſiſting of pretty conſpicuous, longitudinal, oblique, and circular fibres; under that, a ſecond cellular—then a nervous; and innermoſt of all a villous coat, ſimilar to what is found in the ſtomach and inteſtines. There are likewiſe, eſpecially in its ſmaller part, or neck, pores, which yield a mucous juice, to defend it againſt the acrimony of the bile: from the ſame part is produced its duct, which ſtretching towards the left is inſerted into one called the *hepatic duct*, which ariſes from the repeated union, and conflux of the biliary ducts all over the liver; the union of theſe two ducts

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together forms the duct, called the *ductus communis cholidochus*, which penetrates into the duodenum, or firſt of the ſmall guts, juſt below the ſtomach. Thus we find the bile ſeperated by the pori biliarii of the liver, paſſes into the hepatic duct, part of which is conſtantly pouring into the duodenum, and part into the gall-bladder, whoſe uſe is to receive the bile, there to retain it, until it be ſqueezed back again by preſſure of the diſtended ſtomach and action of the diaphragm, through the ductus communis into the duodenum:—by ſtaying there, the bile is rendered thicker, ſome of its aqueous parts being reſorbed by the inhaling veſſels of its villous coat, and therefore ſtronger, and of a more ſaturated yellow; it likewiſe becomes more ſharp, bitter, and rancid, by the heat of the contiguous, and circumjacent parts; while the ſtomach is empty the gall-bladder is at liberty to be diſtended and filled, and therefore becomes fuller after long faſting; and the fuller it is, the leſs compreſſion of the ſtomach is required to ſqueeze the bile out of it—ſo that the more we are prompted to eat, and ſtuff the ſtomach by violent hunger, the greater quantity of bile will be poured into the duodenum, by the ſwelling of the ſtomach during digeſtion, to promote ſo much more effectually the coction of the aliments; and the cyſtic bile will be the ſharper, and ſtronger, by having remained ſo much the longer in the gall-bladder.

So that we find the duodenum receives two ſorts of bile flowing into it from the ſame canal, viz. the hepatic freſh ſecreted from the liver, which never has been

been in the gall-bladder, but goes ſtraight on into the inteſtines, and the cyſtic alſo.

Both biles are of the ſame natures and properties, differing only in degree, inſomuch that many ſpecies of animals have no gall-bladder, and therefore are only furniſhed with hepatic bile, as amongſt quadrupeds, the *elephant*, *horſe*, *aſs*, and *deer*; amongſt birds, the *oſtrich*, whoſe digeſtion is ſo ſtrong, the *ſtork*, and the *pigeon*—not to mention ſome fiſhes.

The BILE is ſomewhat viſcid; coagulable by heat and alchohol; of a ſaturated yellow colour, inclining to green, extremely bitter; the ſharpeſt, and moſt ſtimulating of all the circulating humours of the body, neither acid nor alkali when freſh, but ſtrongly inclining to, and quickly ſuſceptible of, putrefaction; and promoting that diſpoſition in any ſubſtances with which it is mixed, if they are capable of it; it mixes readily with water, it flames not in the fire, unleſs it be dried, and then it burns almoſt all away; it is a powerful penetrating ſoap in every reſpect; it diſſolves all gums and reſins, being rubbed with them.

By theſe properties, when poured upon the alimentary maſh in the duodenum, it muſt effect, *firſt*, a more intimate diſſolution and mixture of the heterogeneous parts together, as it is readily miſcible with water, and renders oil and oily ſubſtances ſo: *ſecondly*, though it is not actually an alkali, yet it nearly approaches towards it; and muſt diminiſh the aceſcent diſpoſition of the chyle, of which we ſhall ſpeak hereafter, and render it more ſimilar to animal nature,

which is alcaleſcent: and *laſtly*, by its ſtimulating power, as it is the moſt acrimonious of all the animal fluids, it, no doubt, helps to excite the periſtaltic motion of the inteſtines, and thereby promote concoction; and, as like aloes, it is a purgative, which it reſembles not a little, it aſſiſts in the expulſion of the fæces: ſo true is it what Lord Bacon ſays, "*that the bile is the "incentive and ſtimulus of many functions of the body.*"

The PANCREAS, or SWEET-BREAD, ſo called, is a long, whitiſh, tender, and friable glandular maſs, ſituated behind the ſtomach and ſpleen, under the liver. Beginning at the ſpleen on the left ſide, it ſtretches tranſverſely acroſs the vertebræ, and with its other extremity, is connected with the duodenum. In the human adult it is about ſeven or eight inches long, and one or more thick; its end at the ſpleen is ſmalleſt, and it grows gradually broader, as it approaches to the duodenum, where it terminates: it hath arteries from the cœliac; its veins run into the ſplenic vein, which opens into the vena portarum; its nerves come from the par vagum, and as they are but ſmall, it hath, like the liver, but little ſenſation: its ſtructure conſiſts of ſmall round acini or glandular ſhoots, connected together with much cellular texture; from each of theſe, there is a ſmall duct ſent out towards its middle; all theſe ducts open into the principal duct, which runs along its axis all its length, and opens into the duodenum, five or ſix inches from the pylorus, or lower orifice of the ſtomach, at the ſame place with the biliary duct.

As

As the ſtructure of the pancreas is the ſame with the ſalivary glands, ſo its juice perfectly reſembles the ſaliva in every property—and therefore may be preſumed to have the ſame uſe—to dilate, open, and diſſolve the alimentary maſh, and render the chyle, to be made out of it, more ſimilar to animal nature; as it is conſiderably larger than all the ſalivary glands put together, and ſituated in a warmer place, its juice muſt far exceed the ſaliva in quantity. It is propelled into the inteſtine by the common impetus and courſe of circulation, aſſiſted by the preſſure of the adjacent parts upon it in breathing: it is poured into the gut at the ſame place with the biliary duct, that it may be immediately mixed with, in order to temper and dilute, the bile, which is both thicker and ſharper than itſelf.

The OMENTUM, or CAWL, is a broad membrane, thin and tranſparent, tender, and eaſily torn, ariſing from the anterior and inferior border of the ſtomach, and falling down commonly as low as the navel, ſometimes much lower; then doubling backwards and upwards, is connected with the inteſtine called the colon, under the ſtomach, thus forming an empty bag. Beſides, its principal connection with the ſtomach and colon, it is likewiſe attached to the duodenum, to the ſpleen, pancreas, and meſentery; it lies immediately under the peritoneum forwards, being a production of its cellular part, and covers part of the ſtomach, and the greateſt part of the anterior ſurface of the inteſtines.

It is every where a double membrane—but every portion of the thin membrane, by itſelf, may be divided into two thinner membranes or ſloughs, which are joined together by a thin cellular texture, in the cells of which fat is depoſited: the ſecretion here is performed in the moſt ſimple manner, there being no other apparatus beſides arteries, veins, and pinguidinous ducts, leading to the cells, or veſicles. The fat is diſtributed in the omentum very unequally, being in ſome places thin and tranſparent, in others an inch thick in fat; in corpulent perſons it contains a vaſt quantity of fat; it hath its arteries from the cœliac; its veins terminate chiefly in the ſplenic branch, and all of them ultimately in the vena portarum.

The uſes of the omentum are, *firſt*, to interpoſe between the peritoneum and the inteſtines, and part of the ſtomach—that all three parts may be preſerved warm, moiſt, and ſlippery, and hindered from growing together: and *ſecondly*, to furniſh oily matter for the bile.

The SPLEEN is ſituated in the left hypochondre, that is, under the cartilages of the left ſhort ribs; it is connected with the colon, ſtomach, left kidney, and by its upper part with the diaphragm; its ſituation is changed by the fullneſs or emptineſs of the ſtomach; it follows the motion of the diaphragm, and is affected by the inflation or ſubſidence of the colon. In general it is placed upwards, and backwards from about the middle of the ſhort ribs on the left ſide; in its natural and ſound ſtate, it is about ſix or ſeven inches long, about three in breadth, and one in thickneſs, of

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an irregular and ſomewhat oval figure, and of a dark livid colour; it receives arteries from the cœliac, theſe entering its ſubſtance, are divided into innumerable branches, and by their evaneſcent extremities terminate in minute veins, forming, by their union, the ſplenic vein, which flows into the vena portarum. The veſſels of the ſpleen are very large in proportion to its bulk, and yet it hath no excretory canal but its vein; its nerves are ſmall and few.

As the ſubſtance of the ſpleen is entirely vaſcular, with a tender cellular texture to ſupport the veſſels and keep them together; its chief uſe has been conſidered to conſiſt in dividing and attenuating the blood that runs into and flows through it; and from its ſituation, as it is much agitated, this alſo aſſiſts in the circulation and comminution of the blood flowing through it, and thereby rendering it fit to temper the ſluggiſh maſs ſent from the omentum and meſentery into the vena portarum, and expedite the ſecretion of bile in the liver.

As we conſider the ŒSOPHAGUS and STOMACH continuations of the ſame tube, we ſhall proceed to deſcribe them together, and afterwards make ſome obſervations on the inteſtines.

The ŒSOPHAGUS, or GULLET, begins at, or is continued with the PHARYNX or THROAT, runs down along the poſterior part of the thorax, behind the wind-pipe, and moſt commonly ſomewhat to its left, paſſes through the diaphragm, and a ſhort way under it opens into the ſtomach, into which it conveys the aliments; it is made up of ſeveral mem-

branes or coats: the external one is cellular---next to that is the muſcular coat, conſiſting of two pretty ſtrong plains of fibres, the exterior of which are nearly longitudinal, the anterior nearly circular. When the former act, they ſhorten and widen the tube---thus fitting it to receive aliment; when the latter exert themſelves, they render it narrower and longer, and propel the aliment onwards: this alternate action, begun at the origin of the canal, and continued downwards ſucceſſively through its different portions, one after another, determines the route of the aliment into the ſtomach.

Its innermoſt coat, called nervous, is tough and ſtrong, fit to reſiſt the hardneſs and roughneſs of what may be ſwallowed; it is lined with ſhort villi, ſtanding up like velvet, ſomewhat in the manner of thoſe of the ſtomach and inteſtines, of which we ſhall preſently ſpeak. There are likewiſe numerous ſecretory ducts opening into it, which yield a mucous liquid, by which it is moiſtened and lubricated, in order to facilitate the paſſage of the aliment through its cavity.

The STOMACH, or VENTRICLE, is ſituated in the abdomen, or lower belly, immediately under the liver, which covers a great part of it above, and laterally; it is placed tranſverſely, in the main, from right to left, but ſomewhat obliquely, ſo that its left or upper orifice, called cardia, which is continued to the œſophagus, lies more towards the vertebræ; and the right or lower, called pylorus, which opens into the inteſtine duodenum, more anterior. In figure it reſembles a bag-pipe; its thickeſt part being its left extre-

extremity, at the implantation of the œſophagus, from which it tapers to the pylorus.—The CARTILAGO ENSIFORMIS, or lower part of the breaſt bone, anſwers nearly to its middle: the ſpleen lies contiguous to its lower part, on the left, and the pancreas behind its bottom.

The ſtructure of the ſtomach is in general the ſame as the œſophagus, of which it may be conſidered a dilatation. Its moſt external membrane is a continuation of the peritoneum; its next is cellular, in which its great branches of blood veſſels and nerves run; in it there are likewiſe conglobate glands and lymphatic veſſels. Under this lies the muſcular coat—the exterior layer is a continuation of the longitudinal fibres of the œſophagus, which open and diſperſe themſelves over the ſtomach—and as the ſtomach is by much the larger of the two, and of an irregular figure, they muſt of courſe be thinner, and leſs numerous in ſome places than others. They run moſtly along the length of the ſtomach, and terminate at the pylorus; they ſeem to ſhorten the ſtomach, though but in a feeble manner, and widen its middle. The other ſtratum or layer, anſwering to the circular fibres of the œſophagus, is by much the ſtronger of the two; its fibres run in a general way round the ſtomach, at right angles with its axis, though with conſiderable and intricate deviations: they ſeem, like the analogous ſtratum in the œſophagus, to lengthen the tube they encircle, and contract its cavity; a remarkable plain of this ſame ſtratum runs from the left orifice to the right by the ſhorteſt way, viz. along the upper and leſſer curva-

ture of the ſtomach; and appears to counteract its other fibres, by drawing the two orifices towards each other. And it is obſerved, that at the entry of the œſophagus into the ſtomach, the circular fibres are remarkably thick and ſtrong, which therefore may ſerve, in ſome meaſure, as a ſphincter to it, to ſhut its cavity there; but, upon the whole, the exact courſe of the muſcular fibres of the ſtomach is ſo extremely difficult to be traced and deſcribed, that hardly any two anatomiſts, unleſs they copy from one another, agree in their account of them. It is ſufficient to conceive them to be ſo framed and diſtributed, as to enable the ſtomach to preſs upon its contents every way, and gradually to expel them.—Next to, and immediately under the muſcular coat, is another cellular texture, more conſpicuous than the exterior one, in which pretty large trunks of blood veſſels and nerves run, after having penetrated through the muſcular coat. Under it lies that called nervous, which is a firm, tough, white, and pretty thick membrane, conſtituting the principal and moſt peculiar coat of the ſtomach. The ſixth in number is another cellular web, much thinner and more ſubtile than the two former—made up of ſhorter threads and laminæ.—The innermoſt of all is the villous coat, ſo called, becauſe it hath villi, or pile like that of velvet, ſtanding out from it; theſe villi are ſmall membranous productions, or ſheaths containing minute tubuli, both of the arterial and venous kind, opening into the cavity of the ſtomach. The arterial tubuli pour into the ſtomach a liquor much more ſubtile than blood, to be mixed with the aliments

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for the purpoſe of digeſtion—and when the ſtomach is empty, this liquor growing ſharper concurs with the ſaliva in exciting the ſenſe of hunger, as has been ſaid; the venous tubuli are abſorbent, and reſorb liquids from the ſtomach; the innermoſt or villous coat being larger than the reſt, forms wrinkles here and there, more or leſs conſpicuous: but at the pylorus there is a remarkable one; where a duplicature of the coat formed by this wrinkle all round the pylorus, and projecting into the entry of the duodenum, ſerves, together with the circular fibres of the muſcular coat, to contract, and almoſt ſhut that orifice, and let only the thinner parts of the alimentary maſh be expelled out of the ſtomach into the inteſtine very gradually, and in ſmall quantities at once: over all the inſide of the villous coat, there open excretory ducts of mucous glands, ſeated in the ſecond cellular membrane, which furniſh a lubricating liquor, as in the œſophagus, ſerving to defend the acutely ſentient inſide of the ſtomach from the acrimony or otherwiſe hurtful qualities of what we may eat or drink.

The ſtomach is plentifully furniſhed with blood veſſels; its arteries all come from the cœliac, and its veins all empty themſelves into the vena portarum: it is no leſs largely ſupplied with nerves, every branch of which ariſe from the par vagum.

Now the uſe of this organ is for the digeſtion of our food, in order to promote the nouriſhment of the other parts of the body, as well as itſelf—and this it is ſuppoſed to promote by heat, moiſture, agitation, and fermentation—all which, that it is capable of producing,

ducing, it will be eaſy to conceive, when we conſider its ſtructure and ſituation—for we find it is almoſt covered with the liver, lies contiguous to the ſpleen and pancreas—is poſſeſſed of a muſcular coat—has large trunks of blood veſſels running through its ſubſtances—lies cloſe under the diaphragm—and fluids profuſely excreted into its cavity, and perpetually preſſing down the œſophagus—beſides its lying over the aorta or great artery of the machine—and thus the texture of the aliment is broken, the juices they afford ſet at liberty, mixed with the gaſtric juices, or thoſe of the ſtomach, thrown into a ſtate of fermentation, and changed into materials proper for forming nutritious fluids, as far as the firſt proceſs extends—which are farther perfected when they paſs into the inteſtines, whoſe ſtructure is ſimilar to that of the ſtomach—by being mixed with bile, pancreatic, and inteſtinal fluids; converting them into a white liquor called chyle, which is abſorbed by the lacteal veſſels, and there in their paſſage through the lymphatic glands to the receptaculum chyli further mixed and diluted with lymph; from this receptaculum the chyle is carried into the vena cava, thrown with the blood into the right auricle of the heart, thence into the right ventricle, which ejects it into the lungs, by the pulmonary artery, in which organ it is further elaborated, thrown from thence into the left auricle and ventricle, and then into the round of the greater circulation, where it meets with freſh attrition; and thus, in a little time, converted into a perfectly nutritive fluid, which is applied to particular parts for their ſupport as wanted.

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But the ſtomach, beſides being the inſtrument for performing the firſt proceſs of digeſtion, is poſſeſſed of another material power, that of promoting ſympathic affections in the conſtitution. Theſe are ſuch affections as appear in parts far diſtant from thoſe, where the action of any ſubſtance cauſing ſuch diſtant affections, are locally acting—as ſweat induced by antimonials taken upon the ſtomach, and only acting immediately on that organ—vomiting produced by a ſtone ſtimulating the kidney, &c.—but of this however we ſhall ſpeak more at large, when we come to treat particularly on this ſubject—and now proceed to deſcribe the inteſtines, and their uſes—which have been divided, and are ſix in number, three ſmall, and three large, viz. DUODENUM, ſo called from being twelve finger breadths long; — JEJUNUM, from being commonly found empty;—ILEUM, from being ſupported in part by the bones called ilia—theſe form the three firſt, or ſmall guts.

The DUODENUM is wider than the others—as it receives all the maſh expelled out of the ſtomach; which cannot be ſaid of the other guts, ſome part thereof being reſorbed by the way, but chiefly on account of its having, for a great part of its length, from its origin progreſſively, no external tough covering from the meſentery to limit its ſize; it is likewiſe redder and more fleſhy than the jejunum and ileum, its muſcular fibres being thicker and ſtronger. About its middle it receives the duct from the pancreas and liver, called pancreatic and biliary, which paſſing through its coat, obliquely open into it through one orifice;

orifice; it makes ſeveral curvatures—the moſt conſiderable is that by which it aſcends almoſt perpendicularly ſome way, ſoon after the two ducts open into its cavity, whereby the alimentary maſh muſt needs be ſomewhat retarded in its paſſage through it; and the bile and pancreatic juice the more thoroughly mixed therewith, and with one another; in its beginning, its innermoſt coat is even, without wrinkles or furrows, ſuch as are called valvulæ conniventes; but in its progreſs, and towards its terminations, it gets many ſuch; which muſt further retard the progreſs of its contents; it is ſupplied with arteries chiefly from the ſame trunk that ſupplies the ſtomach, viz. the cœliac; ſome lacteals, though but few, ariſe from it.

The JEJUNUM.—It is not eaſy to fix exactly the limits between the duodenum, nor ileum, and this gut: one way of diſtinguiſhing the jejunum from the ileum, and perhaps the beſt, is to call all that jejunum, whoſe circumvolutions are above the umbilicus, or navel; and whoſe cavities are remarkably furniſhed with rugæ or valvulæ conniventes: this will make it about a third ſhorter than the ileum; it is narrower than the duodenum; its muſcular fibres are thinner, and weaker; it has ſome cluſters of glands, called Peyer's, from their diſcoverer, and ſends forth numerous lacteals.

The ILEUM makes it windings chiefly below the umbilicus; the lateral foldings are ſupported by the oſſa ilia, or thigh bones; its ſtructure is much the ſame with that of the jejunum, except that in it the valvulæ conniventes decreaſe gradually, both in number and

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ſize, till at length they diſappear. It hath more of Peyer's glands than the two former, eſpecially about its termination, and ſends forth extremely numerous lacteal veſſels, the jejunum and it furniſhing almoſt the whole of theſe canals: it is conſiderably longer than the jejunum, and is continued to the firſt of the thick guts called colon. Both the jejunum and ileum are furniſhed with blood veſſels from the meſenterica ſuperior. Theſe ſmall guts are the inſtruments immediately employed in making the chyle; whoſe coats are pretty much the ſame with thoſe of the ſtomach.

The thick or large guts are alſo three in number—the CÆCUM, COLON, and RECTUM.

The ileum, the laſt of the ſmall guts, terminating near the right kidney, opens into the colon; at its junction with the CÆCUM: this is a ſhort wide ſac about three inches long; its diameter about thrice as large as that of the ſmall inteſtines; it is ſituated under the right kidney, and hid by the laſt convolution of the ileum, and has an appendix ariſing laterally from its bottom, called appendicula vermiformis, and is about the ſame length, but very ſlender, its diameter commonly not exceeding a quarter of an inch; its termination is ſhut, and it fluctuates looſe.

The COLON from its origin makes a large turn upwards as far as the liver; then proceeds tranſverſely to the left under the gall-bladder, which it touches under the bottom of the ſtomach, towards the ſpleen and left kidney, to which it is faſtened; from thence paſſing, it makes ſeveral turns, the whole of them pretty much in the figure of a capital S inverted, then termi-

terminates in the rectum; ſo that it ſurrounds, in a manner, the whole abdomen, ſometimes aſcending, ſometimes deſcending; hence it happens that one ſtool is often ſucceeded immediately by a ſecond: by this contrivance likewiſe the fæces are longer kept, and hindered from being every now and then indecently voided.

The RECTUM or STRAIGHT GUT, ſo called becauſe its courſe, if the length of the body is regarded, is ſtraight, though it is bent backwards and forwards, humouring the direction of the os ſacrum and os coccygis, bones ſituated at the lower part of the back, begins where the laſt curvatures of the colon end, and is terminated at the anus.

It is worthy to be obſerved, that there is a remarkable contrivance at the junction of the ileum with the colon and cæcum, by which the contents of the ſmall inteſtines are allowed a free paſſage into the thick ones, but ſmall regreſs or retropulſion from the latter into the former is effectually hindered and ſtopped; this is called valvula Bauhini—Tulpii, or—Coli. Its effect in the animal œconomy is very ſalutary; for as the contents of the inteſtines begin to putrefy, and become fœtid in the cæcum, by their being retarded there, both upon account of its capaciouſneſs, and the almoſt perpendicular aſcent of the colon, which is continued from it, if their repulſion into the ileum was not effectually hindered, the chyle in the ſmall guts would be tainted with putridity, and even excrementitious matter thrown up at the mouth in obſtinate coſtiveneſs; whereas, not ſo much as a fæcal halitus, or

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the ſubtileſt effluvia, can get that way in a ſtate of health, though ſtools ſhould be wanting ten or twelve days together, as happens in a common way to many.

The cæcum being much wider than the ſmall inteſtines, and at the ſame time lower than the implantation of the ileum, the contents muſt, in ſome meaſure, ſtagnate there, eſpecially as the colon from its origin mounts in a manner perpendicularly as far as the liver in the right hypochondre. By ſtagnating in ſo warm a place, their putridity increaſes there, and they acquire their fæcal odour, which is not obſerved in the contents of the ſmall guts; they likewiſe become leſs fluid, and more conſiſtent, by the reſorption of the more liquid parts through the lacteals and other bibulous veins, ſtill continuing.

The vermicular appendix of the cæcum, by the numerous glandular outlets in its cavity, ſerves, as well as a receptacle for the meconium in the fœtus, to lubricate the contents and membranes of the cæcum, into which it opens, as well as its own, in order to facilitate the propulſion of the fæcal matter, and prevent its adheſion to the coats of the cæcum and its own, and where it muſt ſtagnate longer than it had ſtagnated hitherto any where in the inteſtinal tract. This uſe likewiſe takes place in the born animal; and beſides in obſtinate coſtiveneſs, by affording more room or ſtowage for the congeſted fæces, it renders that complaint more eaſy to be borne, and leſs detrimental than it otherwiſe might be.

The cæcum and colon, beſides having a ſtronger muſcular coat than the ſmall inteſtines, are furniſhed with three ligament-like bands, running length-ways on their outſide, dividing their ſurface into three portions nearly equal. Though they appear like ligaments externally, they are made up in their inner ſtructure of true muſcular fibres, and ſtrengthen the longitudinal fibres of the muſcular coat; as they are longer than the proper coats, they keep them drawn up into folds or wrinkles.

Through theſe inteſtines is propelled and urged on the remainder of the alimentary maſh, after having undergone the action of the ſmall guts: it conſiſts of the earthy part of the materials taken in for food—of the membranous, fibrous, cartilaginous, and bony parts, that could not be ſufficiently broken, and comminuted by the ſtomach or inteſtines ſo as to be taken up by the lacteal, and other abſorbing veſſels; the recrements of the bile, and mucus furniſhed by Peyer's glands, all mixed together.

The cauſes of its propulſion are the ſame as in the ſmall guts, viz. the action of reſpiration, and the periſtaltic motion of the inteſtines themſelves; but its courſe is ſlower than in the ſmall guts, upon the account of its thicker conſiſtence, the aſcent and windings of the colon, the delay it meets with from furrows within the tube, and the great ſtop from hard fæces, pent up in the rectum by the ſphincter ani. The putridity is increaſed as it goes on; and as putrefaction generates air, the colon is commonly found diſtended with flatulency. The whole is more and more

more gradually exhauſted and robbed of its moſt fluid parts; and as what putrid miaſmata are abſorbed by the meſocolic veins, are determined finally into the vena portarum, to contribute towards the rancidity and putreſcent diſpoſition of the bile,—ſo that even here the fæces, which are upon the point of being expelled out of the body altogether, are rendered uſeful, and made ſubſervient to the perfection of what is left behind.

The RECTUM begins in the pelvis where the laſt curvatures of the colon end: its muſcular coat is much ſtronger than in the other inteſtines—the ligament-like bands, which in the cæcum and colon are collected into three portions, are ſpread equally over its ſurface, that no part of it may be weaker than another, leſt it ſhould give way in the effort of throwing out its contents. Into this inteſtine the fæcal matter, now conſiſtent and ſhaped by the cylindrical cavity of the colon, eſpecially in its laſt curvatures, where it is more uniform, and not ſo much diſtended by flatulency, is received and accumulated therein, until, by its increaſed bulk, weight, and acrimony, it becomes troubleſome, and would prove hurtful if long retained. Then it is expelled by the muſcular powers furniſhed for that purpoſe—and ſtrong powers there are, and admirably fitted to anſwer their end.

The INTESTINES are not left to move at random in the cavity of the abdomen, but artfully tied down by a membranous web, which prevents their circumvolutions from being entangled in each other—at the ſame time allowing them a gentle but limited

motion. That part of it, which is connected with the ſmall inteſtines, is called meſentery; the other part faſtened to the colon, meſo-colon. The rectum has a particular membrane allotted to itſelf for fixing it.

This membranous web, for the meſentery and meſo-colon are one continued membrane, is a double production of the peritoneum, ariſing from the vertebræ of the loins; its two laminæ are joined together by a cellular texture, in which the lacteals, blood veſſels, &c. run, and the meſenteric glands are placed: when this double membrane hath arrived at the inteſtines, its laminæ ſeperate and quite ſurround them, thus furniſhing their external covering.

Upon a ſlight ſurvey of the uſes produced by the mechaniſm of this part of the human machine, we cannot avoid being ſtruck with wonder at its apparent ſimplicity, anſwering ſo many ſalutary purpoſes. If we trace the materials thrown into the ſtomach for our ſupport through the inteſtinal tube, we muſt more and more admire the excellence of the divine workmanſhip; for as ſoon as we take our food it is received into a place, in all points calculated to render it fit for yielding its nutritious contents, by mixing with the ſalivary and gaſtric juices—having its texture broken by muſcular action, not only of its own coats, but the organs of reſpiration, and the quickly repeated ſhocks of the largeſt artery in the human machine, and from heat, increaſed from its ſituation, ſoon thrown into the proceſs of fermentation—by all which it is rendered fluxile, and paſſes, from the contrivance at the ower orifice of the ſtomach, ſlowly into the head of the

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firſt of the inteſtines—more capacious than its inferior part; it is there mixed with the bile, increaſed in its quantity in proportion only as it is wanted, by the very means of thoſe things which require it, and pancreatic juice, calculated to convert the various portions into a nutritious fluid, by mixing the parts uniformly together, at the ſame time affording a ſtimulus to promote the propulſive force of the inteſtines, and conſequently increaſe the action of thoſe veſſels implanted in the ſides of them to convey it through the meſenteric glands, where it receives more liquid, thinner than itſelf, to increaſe its fluxility into the receptacle appropriated for this purpoſe, and from thence into the blood—the fæculent, or thicker part, being at the ſame time puſhed forwards into the larger bowels, from whence there can happen no regurgitation of any, even of its finer parts, though delayed for ſome time, in order that a portion of its alkaleſcent or ſtimulating materials may be carried through the vena portarum into the liver, to increaſe the acrimony of the bile;—and as here the fæces acquire a greater hardneſs, conſequently ſtand in need of a greater force to propel them forwards for their exit, the bowels in this place are poſſeſſed of greater ſtrength, and require a ſtronger ſtimulus to excite them to more powerful action, which the putreſcent ſtate of the fæces, acquired by delay, affords.

But beſides the uſes, herein ſpecified, appropriated to the ſtomach and inteſtines, there is another very conſiderable one beſtowed on them, particularly the former, by which very material affections are diffuſed

to almoſt every part of the machine, and from which all the ſenſible parts of the body receive very peculiar and extraordinary advantages—I mean that of conveying action to different parts, and feeling the effects from theſe ſympathetically and inſtantaneouſly;—for in many caſes the ſtomach not only will experience perceptible effects locally of things received into its cavity, but communicate effect to different parts from that local action; nay, will produce them ſometimes without the animal being ſenſible of any action going forwards in that organ; and will itſelf be affected by ſome cauſes acting on other different parts, with the ſame unconſciouſneſs of the locality of action, as well as ſenſible perception of ſuch action—ſo cloſe an union is there between this organ, and the inteſtines, with various parts, the moſt diſtant as well as the more contiguous.

Opium, the active preparations of antimony, bark, and a number of thoſe medicines called cordial and antiſpaſmodic, will diffuſe their effects to the machine in general, and ſome particular parts, from what they exerciſe on the ſtomach, particularly itſelf. Hence will opium produce ſleep—take off pain—promote perſpiration or ſweat—ſtop evacuations—alleviate and conquer ſome convulſive or ſpaſmodic affections.—Antimonials take off cuticular ſpaſms, productive of febrile affections, allay frebrile heat—promote inſenſible perſpiration and ſweat.—Bark increaſe the tone and ſtrength of the ſyſtems—ſtop ſome evacuations—increaſe others—and give firmneſs to the muſcular fibres.

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Cordials invigorate the habit—increaſe the circulatory powers of the conſtitution—ſubdue lowneſs—fainting—warm the habit—and produce diſcharges from the ſkin.

Muſk, aſafœtida, camphor—take off ſeveral convulſion affections—and all theſe things are done by the ſtomach, diffuſively communicating effects to the various parts, whoſe office it is to perform their different operations, or to thoſe where theſe morbid effects may be manifeſted.

And it will alſo be affected by the ſenſations induced on different parts diſtant from itſelf. Spaſmodic affections of the pores of the ſkin will produce ſickneſs, nauſea, vomiting—ſo will a ſtone in the kidney; violent blows on the head, or congeſtions on the brain, will occaſion ſimilar effects—and a variety of others might be adduced tending to prove the ſame points: but enough has been here advanced to prepare us for the fuller diſcuſſion, and better underſtanding of theſe conſequential particulars, when we come to ſpeak more fully on them, as they occur repeatedly in the courſe of the ſubſequent ſheets.—We muſt now advert to the kidneys.

The KIDNEYS are two pretty ſolid glandular bodies, ſituated in the poſterior part of the cavity of the abdomen, on each ſide of the vertebræ of the loins, between the laſt falſe rib, and the oſſa iliaca, or hip bones. The right kidney lies under the great lobe of the liver, the left under the ſpleen, and therefore is higher; they are commonly about five inches long, about three broad, and one and a half thick; they are

connected with the colon, duodenum, liver, and ſpleen, by the productions of the peritoneum. They are in ſhape not unlike a large bean, their circumference being convex on one ſide, and concave on the other—the concave ſide is turned towards the vertebræ, or back bone.

The kidneys are ſurrounded with a looſe cellular texture, in which there is much fat; this likewiſe inveſts the arteries and veins of the kidneys. The proper coat or membrane of the kidneys is double, being compoſed of two laminæ, or layers—betwixt which there is a very fine cellular texture; the external laminæ is very thin, and only ſurrounds the body of the kidney; the internal one penetrates every where by numerous elongations into the ſubſtance of the kidneys, from which it cannot be ſeperated without tearing. The ſubſtance of the kidneys is ſmooth, even, and uniform in adults—in young children divided in a manner into ſeveral lobes and tubercles, or portions.

They are ſupplied with very large blood-veſſels—commonly called emulgents. The arteries ariſe from the great deſcending artery of the heart, nearly at right angles, one large trunk for each kidney; they run horizontally to the kidneys, and commonly without diviſion—and having ſent off branches to the external ſurface of the kidney, the chief trunk enters into its body at its concave part, and is diſtributed by an infinite number of ſmall branches over all its ſubſtance. The veins running along with the arteries open in a large trunk from each kidney into the cava deſcendens,

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or large deſcending vein, near that part of the aorta where the arteries ariſe.

If the kidney is cut through its convex, towards its concave part, into two equal portions, there appears a three-fold ſubſtance compoſing its body—the exterior part called cortical, round the whole circumference of the kidney, of a bright, whitiſh, grey colour;—a middle ſubſtance, called medullary, ſtriated, or ſtreaked, which terminates in the third, called papillary, as it ends in eleven or twelve papillæ, or nipples, from the ends of which the urine drops through ſeveral ſmall holes in the cavity of the kidney.

The intimate ſtructure of the kidney is entirely vaſcular—the ſmall arterial branches proceeding towards the papillæ are reflected back with ſerpentine circumvolutions towards the ſurface of the kidney, then are bent again towards the papillæ; and, at length, ſend off ſtraight urinary ducts perforating the papillæ, and tending to the cavity of the kidney called pelvis, which is continued to the ureter, a veſſel which runs into the bladder.

The pelvis, which is truly the head of the ureter, is the reſervoir into which the urine drops from all the urinary ducts, or tubuli. It is formed by the confluence of three large urinary canals, into which the ſmall urinary ducts open by holes laterally. This cavity, or pelvis, is ſtraitened at length into the ureter, one to each kidney; ſo that the kidney may be imagined to be a vaſcular congeries, conſiſting of arteries, uriniferous ducts, or thoſe which convey urine, and veins, all running together over the ſubſtance of the

kidney; the urinary ducts opening at length into the great urinary reservoir, or pelvis, which terminates in the ureter. In the kidney there are no follicles between the last arterial branches, and the first urinary ducts.

By this apparatus is the urine seperated in the substance of the kidney and sent into the ureter: the vast largeness of the emulgent arteries, and their proximity or nearness to the heart shew, that a great quantity of blood comes, in a small space of time, to the kidneys. Now the blood, which is newly come from the heart, must contain a great quantity of water, as, besides our drink, and the stomachic and intestinal juices, almost all the lymph of the body is poured upon the chyle, in its receptacle in the lower belly, and the duct in the thorax, immediately before it is mixed with the blood.

This water impregnated with the salts of the blood, and some animal oil, attenuated by the process of concoction, or digestion, and circulation, and rendered miscible with water, and united with these salts, together with subtle terrestrious or earthy parts, abraded from the inside of the animal tubes, constitute the matter of urine. The diameters of the urinary ducts are adapted to admit these, and exclude, in a sound state, every thing grosser, as globules of blood, mere oil unattenuated, milk or chyle, and serum or lymph, that is concrescible by fire, urine being not so; at the same time they transmit every thing that is thinner, if it arrives at the kidneys; so that urine is the lixivium or

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ley, as it were, of the blood; by the ſeperation of which it is edulcorated. Its ſalts and oils, which begin by repeated circulations to be more acrid than the tender veſſels of the nerves and brain could bear, being waſhed off, and thrown out by the urinary paſſages.

The URETERS, ariſing from the pelvis of the kidneys, run down obliquely, and with a very ſmall inflexion from the kidneys to the lateral parts of the inner and anterior ſide of the os ſacrum, or lower part of the back, and paſſing between the rectum and bladder, are inverted in the latter. Their ſtructure is much a-kin to that of the inteſtines, though the innermoſt coat is ſmooth and membranous, furniſhed with glands ſeperating a mucilaginous liquor to defend it againſt the ſharpneſs of the urine; they open into the neck of the bladder on each ſide, penetrating obliquely through its coats.

The BLADDER is a membranous and fleſhy ſac or bag, capable of contraction and dilatation, ſituated in the lower part of the abdomen or belly, immediately behind the joining of thoſe bones, called oſſa pubis—and oppoſite to the beginning of the rectum. The figure of it is nearly a ſhort oval—it is broader on the fore and back, than on the lateral parts, rounder above than below, when contracted; and broader above than below when diſtended. It is conceived, as divided into the body, neck, and bottom, into anterior and poſterior, and into two lateral parts, right and left.

The upper part is termed its bottom—its neck is part of its lower portion, with reſpect to its ſituation

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in the body. The bladder is not within the cavity of the peritoneum, that membrane only covering a part of its bottom or upper part, and coming down no farther anteriorly, but being reflected over the bladder, deſcends, covering it, as far down as the inſertion of the ureters.

The ſtructure of this organ is nearly the ſame with that of the ureters, viz. beſides the peritoneum, which covers but part of it, there is firſt an external cellular, under that a muſcular coat; then a ſecond cellular, then a nervous coat, and the innermoſt of all, a coat, in ſome meaſure, villous, furniſhed with glands which ſeperate a mucilaginous liquor, neceſſary to defend it againſt the ſharpneſs of the urine, which ſtagnates within it often, for a very conſiderable time together.

The fibres in the muſcular coat run in all manner of directions, the outermoſt, and moſt remarkable ſeries is longitudinal, running from the neck upwards, and hath been thought to deſerve a particular name—detruſor urinæ, expeller of urine—the others run obliquely, by different degrees of obliquity, and ſome altogether tranſverſe: the neck, or under part of the bladder, is ſhut by a muſcular ſphincter, like that of the anus.

The uſe of the bladder is to receive the urine which keeps conſtantly flowing from the urinary ducts and kidneys into the pelvis and ureter—and to retain it; that it may not indecently dribble, and diſturb the functions of life. It ſeems to change its nature no otherwiſe than by its being kept at reſt in a warm place, thereby becoming more acrid and ſtimulating.

The urine is detained in the bladder by its ſphincter, till by its diſtenſion, and the acrimony of the urine, either or both, we are made uneaſy, and endeavour to expel it through the urethra—ſee page 63, 64, &c.—out of the body, which is done in the ſame manner as the fæces are thruſt out—by the joint action of the diaphragm, and the muſcles of the abdomen, aſſiſted by the proper muſcular coat of the bladder—and the pyramidal muſcles, in a particular manner, favour the evacuation of the bladder, as they lie nearly over it.

The UTERUS, or WOMB, the habitation of the fœtus, is ſituated between the urinary bladder, which is placed before it, and the inteſtinum rectum placed behind it. In a grown woman, not with child, it is about three finger breadths long, two in breadth, where it is broadeſt, and one in thickneſs; it is of the figure of a flat flaſk, convex before and behind, with edges inclining to ſharp; its broadeſt extremity, which is called its bottom, is uppermoſt; and its ſmall part, called its cervix or neck, is downwards—it is covered over with a production of the peritoneum, two portions of which, one on each ſide, faſten it to the ſides of the pelvis, and are called the ligamenta lata, or broad ligaments.

The womb, when impregnated, hath but a very ſmall cavity, its walls being very thick; the cavity is, in ſome meaſure, of a triangular ſhape, and it is lined with a very thin ſmall membrane.

The womb is made up of a compacted cellular ſubſtance, with a copious intermixture of blood veſſels—there appears ſomething like muſcular fibres amidſt the

the cellular ſubſtance, eſpecially in women newly delivered, variouſly diſtributed in little circles.

The ſmaller and lower part of the womb, called its neck or cervix, abounds with callous rugæ, or folds; in the interſtices or ſpaces of which there are mucous ſinuſes, and here and there round veſicles full of a pellucid lymph, where it opens into the vagina, deſcribed below; it forms a round protuberance, not unlike the glans penis, called the os uteri, mouth of the womb, or os tincæ, becauſe ſuppoſed, like a tench's mouth, divided by a rimæ or chink; on which protuberance there is plenty of a mucous, glutinous liquor, furniſhed by numerous ſinuſes there: this glutinous liquor ſerves to ſhut the os uteri in pregnancy.

The VAGINA, or canal of the uterus, is about ſix or ſeven inches long; it is ſtretched from the mouth of the uterus to the pudendum, or external parts; it is of the ſame texture with the uterus—cellular, with numerous blood-veſſels interwoven: its inner ſurface hath ſeveral rugæ, or wrinkles—there are likewiſe nervous papillæ ſpread over it, which render it more ſenſible—its external orifice is ſurrounded with muſcular fibres, which conſtrict it.

The uterus, as hath been ſaid, is plentifully ſtored with blood-veſſels—they are furniſhed from the hypogaſtrics, by which, likewiſe, the inner and greater part of the vagina is ſupplied; its outer extremity is furniſhed from the external hæmorrhoidal.

The womb is adapted for the retention of the embryo, and its nouriſhment, till the time of birth; and with

with the veſſels of the vagina, for affording the monthly evacuation called menſes, or catamenia.

But to the womb, for the purpoſe of promoting the generation of the human ſpecies, there are united two other contrivances on each ſide, the one called tubæ Fallopianæ, Fallopian tubes, from the diſcoverer, Fallopius; the other, ovaria, from their retaining ſmall round ſubſtances of the nature of eggs.

On each ſide of the fundus uteri the former open by two ſmall orifices, which in a dead ſubject, with difficulty admit a hog's briſtle; from this ſmall opening each tube proceeds ſomewhat tranſverſely from the fundus towards the lateral parts of the pelvis, running between the duplicatures of the broad ligaments—their diameters gradually augmenting to their extremities, where they are about a quarter of an inch wide—they run not ſtraight from the womb, but wind in ſuch a manner as to turn their wide, open extremities towards the ovaria; theſe extremities are jagged or ſcollopped—their external membrane, or covering, is from the peritoneum; their proper coat is plentifully furniſhed with veſſels; there are ſome obſcure, ſeemingly muſcular, fibres interſperſed, ſupported by a ſpongy cellular texture.

The OVARIA are two whitiſh, oval, flat bodies, ſituated on the ſides of the fundus uteri, to which they are joined by a kind of ſhort ligament, and incloſed, together with the tubæ Fallopianæ, in the duplicature of the broad ligament—their ſubſtance is cellular and cloſe, without fat—in it there are found, even in the ovaria of virgins, little round veſicles, called ova, or

eggs—of an uncertain number, commonly ten or twelve, full of a tranſparent coagulable fluid. Theſe ova adhere cloſely to the texture of the ovaria.

The OVARIA and TUBÆ Fallopianæ, are ſupplied with blood-veſſels from the ſpermatics, which have nearly the ſame origin in females as in males—viz. the arteries of the aorta, near the riſe of the emulgents, and the veins from the vena cava, and emulgent vein; theſe inoſculate with the veſſels that go to the uterus.

Theſe alſo are ſuppoſed to perform particular functions in the propagation and formation of our ſpecies—for the ovaria are ſqueezed by the edges of the tubes, diſengage ſome of the ova, or eggs, which are impregnated, generally one, now and then two, three, or four, which are forced into the tubes and carried into the cavity of the uterus, where they fix themſelves and are retained, and here the fœtus is nouriſhed till the proper time for its birth, which happens almoſt always in the ſpace of nine months.

We might now, according to what we firſt propoſed reſpecting the nature of our ſubject, finiſh our anatomical account, as ſufficient has been deſcribed to give a tolerable idea of conſtitutions in general; but as we alſo intend to ſhew the methods of preventing, or ſtopping the progreſs of particular complaints, local as well as general—we muſt, before we conclude, ſpeak of the teſtes, urethra, and penis, the male parts of generation—as they are ſubject to ſome complaints which require early attention, by which ſeveral diſagreeable conſequences may be prevented.

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The TESTES, or TESTICLES, with regard to their ſituation, are ſufficiently known; they are defended from cold, and other injuries, by ſeveral membranes or coats.

The outer one is called the ſcrotum—which is made up of the epidermis, or ſcarf-ſkin;—the ſkin, and immediately under the latter, a thick cellular texture, cloſely adhering to it, but without muſcular fibres: next under this is what they call *dartos*, from its drawing up the ſkin. This coat envelopes each teſtis ſingly; and by the junction of both together, where their ſides are contiguous, make a partition or ſeptum between the two teſtes: it is likewiſe wholly cellular, without muſcular fibres, and without fat. Under the dartos is the cremaſter muſcle, ſo called from its ſuſpending the teſticles; there is one to each, and ariſe from the tendon of the obliquus deſcendens, oblique deſcending muſcle of the lower belly; yet ſome fibres from the obliquus aſcendens, oblique aſcending muſcle, the embracing the body of teſtes all around, ſerve to raiſe it, and ſqueeze it in the act of generation. It is probable, that by the action of this muſcle, that the ſcrotum is gathered up into rugæ by cold, as neither it, nor the dartos, are furniſhed with muſcular fibres. Under this muſcle is another coat of a looſer cellular texture, called vaginalis, from forming, as it were, a kind of ſheath to the teſtes, between which and the innermoſt coat of all is a looſe ſpace, in ſome meaſure like that between the heart and pericardium, where a watery humour is contained—the laſt and innermoſt coat is called, from its whiteneſs, the albuginea; it

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is a thick, cloſe, ſtrong membrane, immediately contiguous to the kernel of the teſtes; the ſubſtance of which kernelly part is of a white colour, and from reaſon and analogy, it is concluded to be a continuation of the evaneſcent branches of the artery called ſpermatic, from its ſupplying blood to the teſtes, from whence the ſemen is ſecreted, rolled up together. It is divided into more than twenty portions or cluſters, ſeparated from one another by as many partitions, which are productions of the albuginea. Each cluſter, contained between two partitions, terminates in one duct; which ducts, above twenty in number, meeting together, form a kind of network adhering to the albuginea; every duct anaſtomoſing with thoſe contiguous with it: from this duct ariſe ten or twelve other diſtinct ducts, which being ſeperated, bent, or folded in a wonderful manner, make as many vaſcular cones, and by their uniting conſtitute the head or beginning of the epididymis, or ſmall teſticle. This ſingle duct, variouſly bent and folded into ſerpentine windings, ſuch as there is no inſtance of in any other part of the body, its windings being faſtened together by cellular texture, makes a roundiſh body on the upper and poſterior part of the teſticle, called epidydimis, which, at length, terminates in a firm and tough cylindrical tube, called vas deferens.

The PENIS conſiſts of two bodies called corpora ſpongioſa, or cavernoſa, ſpongy or cavernous bodies—part of the urethra, the glans or nut at its extremity, and its integuments. The integuments are, firſt the ſcarf-ſkin, and true ſkin—which being folded back, and

and adhering round the root of the glans, forms what is called the præpuce, in the inſide of which there are ſmall glandular folliculi, which ſeperate an oily ſubſtance, ſerving to make the præpuce ſlip over the glands, and hinder them from growing together: this ſubſtance forms white flakes, and grows rancid and fœtid by long ſtagnation. In hot countries, it is more apt to corrupt and create inconveniences, than in temperate climates. This ſeems to have introduced circumciſion, which was early practiſed all over the Eaſt, and made a part of the Jewiſh religion. It is performed by cutting off the præpuce quite round, cloſe by the root of the glans.

Under this common integument, the penis hath a proper coat covering all its body, from the glans excluſive backwards, and is of a tough tendinous texture.

The TWO CORPORA SPONGIOSA ariſe from the os pubis on each ſide, and are continued to the root of the glans: they are ſo called, becauſe they are porous like ſponge, and capable of being enlarged by a fluid penetrating their ſubſtance, chiefly in the living, by blood—or in the dead ſubject, by mercury or inflation of air.

The URETHRA is a continuation of the neck of the bladder, and runs in a furrow between the two corpora ſpongioſa to the extremity of the glans—it conſiſts of two thick ſpongy membranes, with a ſpongy texture between them—its beginning is covered by glands called PROSTATÆ—at its emerſion from which, it becomes thicker and wider for the length of

an inch, which thick part is called its bulb, from the reſemblance it bears to a bulbous root; its inner membranes are pierced with many holes, here and there, through which, from a glandular apparatus in the ſpongy ſubſtance of the urethra, a mucilaginous liquor is furniſhed, ſerving to defend it againſt the acrimony of the urine. Beſides theſe orifices, there are three other glands, two near the bulb of the urethra, one on each ſide, about the ſize of a pea; each of which ſends off a long duct which opens into the urethra, and a third ſingle one, leſs than the other two, at its bend under the os pubis—which ſends off two ducts opening likewiſe into that canal. The firſt two are often found, but ſometimes wanting or very ſmall; the third is but ſeldom met with—the orifices are called by ſome lacunæ; theſe glands—Cowper's glands; they both, probably, ſerve for the ſame purpoſe.

The GLANS is a continuation of the ſpongy ſubſtance of the urethra, reflected over its extremity, and expanded in the form we ſee: it is covered over with a thin epidermis or ſcarf-ſkin, under which there are numerous nervous papillæ, rendering it extremely ſenſible.

The penis is plentifully ſupplied with blood-veſſels from the iliacs, both external and internal—its nerves come from thoſe of the loins and ſacrum.

The uſe of the parts we have now deſcribed are for the propagation of our ſpecies, and ſome for the evacuation of urine.

We

We ſhall now conclude what we mean to advert to on the anatomical part of the machine, which we have rendered very eaſy to be conceived, and think will be highly uſeful in aſſiſting the uninformed readers to have juſt conceptions of what we mean by particular conſtitutions in general, — what of general diſeaſes, and thoſe called topical, or confined to ſome particular part,—and make them perceive the reaſon why ſuch and ſuch particular remedies or regimen ſhould be employed in ſuch and ſuch particular caſes, as come within the reach of every man's power—whether they aim at preventing the acceſſion, or ſhortening the progreſs when begun; all which will be much better, and eaſier underſtood, by the ſketch, conciſe as it is, which has been given. For, certainly, laying down rules and directions for a man how to proceed *in nervous caſes*, who has no idea of a nerve; *in inflammation*, who knows not any thing of the vaſcular ſyſtem; *in jaundice, ſtone, gravel*, who is totally ignorant of the liver, ſpleen, bladder, kidneys, is as bad as leading a man blindfold through a country to diſcover its beauties, and give him a knowledge of its ſituation, ſoil, produce, &c.—And to talk to a man of diſcovering the nature of his conſtitution, and directing him to proceed agreeable to its diſpoſition, without telling firſt of what it is compoſed, and making him ſenſible of the natural action of its component parts, would be as vague and uſeleſs as chopping logic to a ruſtic—it might confound, but could not inform: and it is for want of true knowledge in theſe particulars, that men, in other reſpects ſenſible, are ſo often heard delivering

a profuſion of nonſenſe on medical ſubjects. We therefore, in order to correct errors ſo often detrimental in their conſequences, have preſumed to alter the general plan of publications of this ſort, by thus beginning anatomically—and ſhall now proceed to ſhew the different conſtitutions—what they are, and how they may be diſcovered.

But, firſt, we muſt take notice of thoſe parts which are called the moving powers, by which all conſtitutional action is promoted, and life preſerved; and theſe are—the *brain and nerves—the heart, and vaſcular ſyſtem—the lungs and blood—and the muſcular fibres.*

Now in proportion to the different degrees of power which theſe poſſeſs in their natural ſtate, ſo may conſtitutions in general be properly denominated.

The *brain and nerves* are conſidered as the origin of incitability—that is, motion produced in them by mental affections, and ſympathy.

The *heart, vaſcular ſyſtem,* and *muſcular fibres,* as the fountains of irritability—that is, motion produced by material ſtimulus.

The *lungs and blood,* the ſource from whence all animal heat is derived—the univerſal ſtimulant of the human machine.

The *muſcles or muſcular fibres,* as the inſtruments of motion.

The *ſtomach, inteſtines, and other viſcera,* as parts which may themſelves be acted upon, and produce action of ſome of the general moving powers, and each on parts diſtant from them.

But

But we muſt obſerve, that with reſpect to the term, irritability—it is by all authors equally applied to the nervous and vaſcular ſyſtem, as well as muſcular fibres, which we have ſhewn it neceſſary to alter, and confine it to the two laſt alone—becauſe, independent of the nerves, they cannot be put into motion without ſome material ſtimulus locally applied to them—whilſt the nerves may be brought into action by affections purely mental—the preciſe nature of whoſe action we cannot deſcribe, and know them not but by effects. Beſides, though they are in the habit united cloſely, they may exiſt independent of each other, and may be ſeperately affected—ſhewing thoſe affections belonging to themſelves, without diſturbing each other in many caſes.

It was, therefore, unavoidable to ſeperate the two—that conſtitutions might be preciſely and diſtinctively marked, where the action of one or the other were moſt prevalent, and hence great confuſion prevented: add to this, it empowers us to account more rationally for ſympathetic affections, that is, where parts, diſtant from others, ſhew manifeſt ſigns of affection, though the cauſe producing them lies in ſome more diſtant part; or where affections are ſuddenly produced in the habit, from ſome external appearances out of the habit, no matter being at that time inherent that occaſions theſe affections from the locality of irritation. But we muſt allow alſo, that the nerves are capable of being put into motion by material ſtimulus.

Hence then it is clear—that

The nerves are capable of being brought into action

by mental affections, ſympathy, and material ſtimulus, themſelves abſtractedly conſidered.

The vaſcular ſyſtem, and muſcular fibres, under the ſame conſideration, only by material ſtimulus.

That in their combined ſtate, they mutually act on each other, in many caſes, or may be ſeperately affected.

Now as the moving powers vary in their different degrees, and different combinations reſpecting thoſe degrees, ſo do we conclude conſtitutions ought to be determined—and ſo ought different regimen, and applications of medicine, be adviſed—for preſerving health, preventing, retarding the progreſs, and curing of diſeaſes.

SECTION II.

On CONSTITUTIONS.

THERE is no ſubject on which we hear valetudinarians ſo much converſe, as the particular nature of their conſtitutions; nor any on which they form ſuch a variety of conjectures, at the ſame time ſpeak ſo poſitively, as if they underſtood what was meant by the term; nay, even are angry if you diſpute their want of the moſt minute knowledge in this reſpect; and, indeed, it is almoſt held as an undoubted truth, that all men are the beſt judges of their own conſtitutions.

Not-

Notwithſtanding, I can by no means allow this to be a truth, yet I can very readily conceive how they make the miſtake, and on what it is that they build ſuch a conceit—they mean, that all men can tell what things beſt agree with them, which commonly occur, and which they have obſerved from repeated experiments; but this only comprehends the effect produced by different cauſes, and may aſſiſt in giving information to ſcientific men in inveſtigating the preciſe nature of particular conſtitutions; but never can lead men, who have not made the medical art their ſtudy, to ſufficient diſcoveries, for underſtanding the ſubject properly; a ſubject which cannot be ſcrutinized too cloſely, as perhaps the whole good to be derived from judicious aſſiſtance upon that knowledge totally depends. We ſhall, therefore, go a little deeper into this matter, in order to lay a foundation for the application of thoſe remedies, from whence every man may derive benefit, with ſome degree of certainty, and after which all naturally thirſt with the greateſt avidity. But to make this buſineſs eaſy, we ſhall confine ourſelves to the terms of which people in general make uſe, and endeavour to ſhew, what ought to be underſtood by them, applied to the varieties preſenting themſelves in different ſhapes in the human machine.

Mankind in general have furniſhed a great number of conſtitutions—under the following appellations:

1. Strong, robuſt
2. Weak, relaxed, delicate
3. Nervous
4. Irritable
5. Torpid
6. Coſtive
7. Lax
8. Bilious
9. Phleg-

9. Phlegmatic
10. Scorbutic
11. Gouty
12. Rheumatic
13. Scrophulous
14. Flatulent
15. Plethoric, or full
16. Hot
17. Cold
18. Conſumptive.

And theſe have been deduced from the different appearances of the conſtitution—the various effects to which they were prone; the humours conſidered as inherent; and to the affections of particular parts, which they conſtantly, or on ſlight occaſions, experience. But before any benefit can accrue in the application of remedies, or the manner pointed out by which miſchief may be avoided from the ſame ſource, we ſhould be acquainted with the corporeal conſtruction and nature of their powers, which conſtitutes moſt of theſe deviations; and it is for want of this knowledge that ſelf created phyſicians, *doctors of imagination*, occaſion very often a multiplicity of evils to their credulous patients, and to themſelves, under many morbid circumſtances—preſcribing boldly the ſame applications to conſtitutions diametrically oppoſite to each other, and which require very different materials to conquer the ſame complaint. For want of this knowledge, I have known *coughs converted into pulmonary conſumptions*, and that not unfrequently; *gout into apoplexy*; *colds, inducing ſlight febrile affections, into inflammatory fevers*; *ſore throats*, eaſily curable at firſt, *made dangerous, and too often fatal*—and many other deleterious tranſitions occur from the ſame fountain—for it is a certain fact, there is not any man that does not fancy himſelf, in ſeveral caſes, a phyſician; and when, by his ignorance in

adviſing

adviſing improper remedies, he has created miſchief, perhaps death, he conſoles himſelf, and the unhappy friends, by ſaying, he did it for the beſt.

To guard, therefore, againſt the unfortunate conſequences of theſe *good* actions, our duty calls upon us to ſpecify the particular nature of theſe conſtitutions, that we may hereafter, when requiſite, point out properly adapted remedies, that the patients may not fail in the attempt to alleviate, or cure, or prevent particular complaints.

In STRONG, ROBUST CONSTITUTIONS,

The muſcular ſtamina are firm, and well compacted; powerful and agile in motion; the pulſe ſtrong and full; the nerves equable and forcible in their influence; the circulation of the blood free, and the texture of that fluid poſſeſſed of great tenacity; the complection healthful, and the whole habit in a ſtate of ſtrong activity.

In WEAK, RELAXED, and DELICATE,

The reverſe of theſe occur—the muſcular ſtamina are weak and looſe, imbecile in motion, and ſoon wearied; the pulſe ſmall and quick; the nerves irregular and debilitated in their influence; the circulation of the blood languid, its texture looſe; the complection pale or ſallow; and the whole habit in a ſtate of debility.

In the NERVOUS—the conſtitution is like the latter in a great degree, but the nerves are eaſily incitable from ſlight cauſes, creating ſpaſmodic affections in different parts. People of this conſtitution are generally

nerally timid—have great variability of ſpirits, and much ſubject to hyſteric fits, cramps, and flying pains, —putting on the appearance of various complaints, according to the parts affected; the urine is commonly pale, ſometimes made in ſmall quantities, then becomes turbid—or in large quantities, then remains limpid. In theſe, therefore, the nervous ſyſtem is in ſuch a ſtate, ſo as to be quickly incitable, and readily and frequently thrown into morbid action.

In the IRRITABLE

There is a ſtrong propenſity in the vaſcular ſyſtem, and muſcular fibres, to be thrown into quick ſtates of contraction—the conſtitution being in an intermediate ſtate, between the robuſt and relaxed, and participating, in ſome degree, of the nervous. Theſe are ſubject to have the circulation of the blood readily increaſed—fluſhings in the face—are iraſcible, and eaſily moved to anger—they are ſoon heated by any ſtimulant taken internally.

Oppoſite to this conſtitution is the

TORPID.—In theſe the circulation of the blood is languid, ſeems rather to creep, or undulate, than circulate; the extremities are generally cold, and they feel, without any cauſe very often, internal oppreſſion; dreading, and fearful of imaginary calamities—they are naturally inactive, and indolent, unleſs rouſed by ſome pleaſurable purſuit; irreſolute, mutable, and very often timid in the extreme, where any difficulties are to be ſurmounted, and the habit is generally coſtive.

The

The PHLEGMATIC.

In theſe the lungs, ſtomach, and inteſtines, are apt to be loaded with too great a quantity of viſcid phlegm —from the digeſtive organs being in too weak a ſtate, and wanting a due ſecretion of bile—the habit coſtive—in general cold—ſubject to chronic coughs, and expectoration of tough viſcid phlegm—the circulation of the blood ſluggiſh—the breathing laborious—the muſcular fibres and vaſcular ſyſtem torpid—though corpulent, they very often are groſs, and frequently ſubject to œdematous, or paſty ſwelling of the legs.

The PLETHORIC.

Theſe are ſuch whoſe conſtitution is apt to breed a great quantity of blood, and are chiefly of the irritable claſs, more inclining to the robuſt and athletic. In theſe the digeſtive powers are good—the appetite ſometimes voracious, ſometimes moderate—frequently hæmorrhages occur, and very often copious evacuations of different ſorts—alſo head-aches of the dull, heavy kind, attended with frequent giddineſs—they are liable to become often drowſy and ſleepy, and fond of that ſpecies of indulgence—and theſe generally ariſe from too great plenitude in the ſanguinary ſyſtem.

The BILIOUS

Are ſuch as have a very copious ſecretion of bile, which is apt to collect in its repoſitory the gall-bladder, nor be regularly excreted, or paſs into the duodenum, or firſt inteſtine—by which means, ſtagnating there too long, perhaps from its viſcidity, it acquires a de-

gree of acrimony, which, when poured into the inteſtines, occaſion bilious colic, cholera morbus, or a vomiting up and purging of bile—bilious looſeneſs. In theſe, the complection has generally a ſallowiſh caſt; they complain frequently of bitteriſh taſte in the mouth—are commonly coſtive, and have deep-coloured urine often, depoſiting a yellow ſediment; their appetite is very variable, and their digeſtion, for the moſt part, weak.

The COSTIVE.

In theſe conſtitutions, ſome of them are naturally ſo inclined—but if not, it depends on particular ſtates of the inteſtines, abdominal muſcles, and the different viſcera that pour forth their contents into the bowels; in theſe caſes, the inteſtines are either in a ſtate of too great torpidity, or there is a deficiency of the internal fluid—pancreatic juice—or bile, which laſt may be too inert—or the abdominal muſcles may be too relaxed—which occurs ſometimes in women who have had ſeveral children.

The contrary of which happens in

The LAX;

for in them the inteſtines may be in too irritable a ſtate—ſlightly moved, or may be too ſlippery, from an increaſed diſcharge of the pancreatic and inteſtinal glands—or the bile may be too acrimonious—or acrid humors may be too conſtantly poured into the inteſtines, and ſtimulate them to too ſtrong and quick repeated action.

The

The FLATULENT

Are ſuch as have too great a quantity of wind, or air, in the habit, in a looſe unfixed ſtate—particularly in the ſtomach and bowels, which is diſcoverable very often by flying, wandering pains, increaſed on warmth by its rarefaction—by diſtenſion of the ſtomach and inteſtines—a rumbling noiſe in the bowels—emiſſions of wind upwards and downwards—and theſe may occur from a weak digeſtion—allowing particular materials to emit their air, and the juices formed from them incapable of re-abſorption—from their not being properly elaborated in the firſt paſſages: from being alſo too tight laced, women often induce this complaint—and by the too common and frequent uſe of warm glyſters—by a relaxed ſtate of the ſtomach and inteſtines—and by feeding conſtantly on flatulent food, and keeping long faſts.

The SCORBUTIC.

Such are indiſcriminately ſo ſtiled, who have the appearances of eruptions on the ſurface of the ſkin of different kinds—red puſtulous pimples, nettle-raſh, or dry ſcurfy ſcales—theſe truly indicate a prevalent acrimony in the habit of ſome ſort; but the true ſcorbutic conſtitution is known by other marks—black, or livid, or yellow ſpots, on the ſurface of the ſkin—tender gums—bleeding on the ſlighteſt touch—ſallow complection—rank fetid ſweats—looſe texture of the fleſhy parts appearing puffy and flabby—and this laſt owes

its

its origin to the texture of the blood being in a broken or very looſe ſtate—whilſt the former depends more upon acrid humors in the habit—obſtructed, or rather diminiſhed, perſpiration—weak digeſtive powers, and feeding on unwholeſome food, or eating and drinking too freely and luxurioufly.—Theſe, therefore, are better divided into acrimonious and ſcorbutic—the firſt where the acrimony of the fluids is indefinite and cannot be ranged under any known ſpecies.

The GOUTY

Are ſuch as are troubled with flying pains, occupying chiefly the ſmall joints of the hands and feet—and having regular fits of that diſeaſe—being ſubject frequently to indigeſtion, and to be ſeized with pains of the joint of the great toe—or having pains of the ſtomach and kidneys, alternating with thoſe of the hands and the feet—ſubject, from the ſame cauſe, to be teaſed with pains in various parts before the fit of the gout has become regular, or has retroceded, or is miſplaced, owing often to debility of the active powers of the conſtitution—particularly the ſtomach and vaſcular ſyſtem.

The RHEUMATIC.

Theſe are ſuch conſtitutions as are replete with rheumatic acrimony, which fixes itſelf in different parts of the machine, chiefly on the large joints, and runs along the courſe of the muſcles—or fixes itſelf alſo on the membranes of the muſcles, ſometimes affecting one, ſometimes another—and flies conſtantly from

place

place to place, aſſuming different appearances according to the peculiarity of the habit in which it reſides—becoming in ſome acute and inflammatory, particularly in the robuſt and athletic, who have ſtrong ſtamina, and are readily irritable—in others, painful and chronic—in ſuch whoſe conſtitutions are more debilitated or torpid.

The SCROPHULOUS

Are ſuch, in which that taint called ſcrophula, or King's evil, is inherent, manifeſting itſelf by glandular tumors, chiefly of an indolent kind, in the neck, for the moſt part, but alſo in other places of the body, where the lymphatic glands are diſperſed, particularly in the lungs and meſentery—attacking the fair complectioned and delicate moſt commonly—ſhewing itſelf alſo by an enlargement of the upper lip and alæ naſi, or ſides of the noſtrils—and ſwelling of the belly—a preternatural ſlight heat generally attending the whole habit—and febrile affections—and ſometimes a ſhort tickling cough.

The HOT and COLD

Depend upon the quantity of blood, in an healthful ſtate, and different degrees of vaſcular action—if the habit is full, and the veſſels are in a ſtate of irritability, the conſtitution will be of the former claſs—if there is a paucity of that fluid, or no redundancy, and the vaſcular ſyſtem is in torpid ſtate, whereby circulation is not duly performed, it will be of the latter—for where the blood is moſt ſuperabundant, and the irritability

tability of the vaſcular ſyſtem great in degree, there will always be the moſt heat, and vice verſa.

The CONSUMPTIVE.

Theſe are generally ſuch whoſe texture of ſolids are very delicate—the vaſcular ſyſtem irritable, and ſome degree of acrimony in the humors—pale complectioned—narrow cheſted—long necked—ſubject to febrile heats, imitating hectic—eaſily thrown into pulmonic hæmorrhages—and frequently affected with ſlight tickling coughs—their teeth clear, with an appearance like tranſparency—their eyes often bright, ſometimes towards evening languid—the ends of the fingers rather bulbous—and the nails curved inwards, particularly when they approach near a morbid ſtate.

We have here attempted to point out what is to be underſtood by the terms commonly made uſe of in applying them to particular conſtitutions; but we find that ſome have alluſion to, and involve general ideas—whilſt others are only confined to ſingle or particular ones, and of which no uſe can be made, whilſt in ſuch a vague, and unſettled ſtate—for in order to be of ſervice, either in our preventive or curative plan, we muſt advert to thoſe particulars which form conſtitutions in general—for it is by the regulating of them we muſt adminiſter relief, when afflicted with diſeaſes to which they are prone—and prevent thoſe whoſe ſeeds are diſſeminated through the habit from becoming active, and by that means conſtituting complaints to which they are ſpecifically adapted—we, therefore,

form

form conſtitutions into ſeperate diviſions—ſuch as are *ſimple and general*—*mixed and general*—and ſuch as are *peculiar*.

SIMPLE, and GENERAL are,

1. Strong and robuſt.
2. Nervous.
3. Irritable.
4. Torpid.
5. Weak, relaxed, and delicate.

But theſe may be combined—and form others,

As STRONG—ROBUST—and *Irritable*,
Torpid,
Nervous.

Though the firſt of theſe is what moſt commonly takes place.

The WEAK, DELICATE, and RELAXED—may alſo be ſubject to the ſame combinations—

Nervous,
Irritable,
Torpid,

Apt to take place in the order here ſet down—with regard to the moſt general mode.

The MIXED and GENERAL—are

1. Plethoric.
2. Hot.
3. Cold.
4. Conſumptive
5. Acrimonious.

For theſe may be combined with any of the former—but depend upon the quantity and quality of the

blood—and the greater or leſs degree of the irritability, or incitability of the vaſcular or the nervous ſyſtem.

The PECULIAR are,

The 1. Lax.
2. Coſtive.
3. Bilious.
4. Phlegmatic.
5. Scorbutic.
6. Gouty.
7. Rheumatic.
8. Scrophulous.
And 9. Flatulent.

Any of which may be combined with thoſe which are ſimple and mixed—as a conſtitution may be

Strong, robuſt, plethoric, hot, coſtive, gouty—ſo may the weak, relaxed, and delicate—though plethora is moſt generally the concomitant of the former.

It will be unneceſſary to form any other combinations in this place, as the reader will very readily conceive them himſelf; we ſhall only, therefore, obſerve, that there are ſome which can never exiſt in a combined ſtate, viz.

The *ſtrong and robuſt, with the weak, relaxed, and delicate—the hot and cold—the irritable and torpid—the lax and coſtive.*

Now as there is certainly ſuch a diverſity of conſtitutions, many of them diametrically oppoſite to each other; and as there is alſo a variety of accidents and diſeaſes which will affect the different conſtitutions in

ſimilar

ſimilar modes, how can it happen that one and the ſame application ſhall be proper to all? for it is owing to the operations of the habit that diſeaſes are prevented—made milder, or cured; and it is to our applications, that theſe ſalutary operations are often brought about where Nature is defective—and, conſequently, obliged to our aſſiſtance. We muſt, therefore, ſelect our remedies, and appropriate them to the particular conſtitutions; and let our directions be formed, with reſpect to diet and conduct, conſiſtent with the ſame conſtitutional points—and more eſpecially where our attempts are levelled at the prevention of morbid attacks—in completing of which, we are to aim at keeping the conſtitution in a ſtate of health, adequate to the powers with which it was originally endowed—ſo that the common cauſes of diſeaſes may not be enabled to produce their effects—which originate from different qualities and changes of the air—called conſtitutions, climate, morbid effluvia, and intemperance or indiſcretion—under which laſt we comprehend all thoſe actions which, in their regulations, depend upon our own power, or are deduced from neceſſity.

Or, that ſuch diſeaſes, as are unavoidable, may be made to produce their influence on the machine in the moſt mild and gentle ſtate—ſuch as, ſmall pox, meaſles, and various fevers, and other complaints of the infectious or contagious claſs—or thoſe which ariſe from an hereditary cauſe: in accompliſhing which purpoſe, it will chiefly depend upon the proper uſe and application of what are called the NON-NATURALS; which, before

we can be enabled to give proper directions in theſe points, we muſt examine, and ſhew the peculiar influences they are capable of producing in the habit.

SECTION III.

OF THE NON-NATURALS.

THE celebrated HOFFMAN, to whoſe labours the art of phyſic is much indebted for its improvement, ſays, "A phyſician aſſiſting in the curative "operation of nature, ſhould uſe the milder and ſimple diætetic remedies, rather than thoſe which are "very active, and compounded of the pharmaceutic "claſs. By diætetic is to be underſtood, thoſe materials which are taken from ſuch things, as every "body requires for the preſervation of health and life, "and which are received in the ſchools, under the denomination of non-naturals—for, inaſmuch, as "from a wrong, or inordinate uſe of theſe, the firſt "foundations and proximate origin of diſeaſes ariſe, "and alſo have their violence increaſed; ſo nothing is "better adapted to expel or ſubdue morbid affections "of various kinds, than a proper uſe of them, with a "regular mode of living, for without that, nature "can do no good in healing, nor medicine produce "its deſired effect. Whence the truth of GALEN's "aſſertion—'That medicine has no efficacious re-

"medy

" medy which can bring any permanent aſſiſtance, if " the mode of living ſhould reſiſt it, or ſhould not " act in conformity, and become an uſeful auxiliary." And he ſolemnly aſſerts, " That by diætetic remedies, " (in which change of air and climate, proper exerciſe, " well adapted meat and drink, alſo a prudent uſe of " whey and mineral waters, with abſtinence and eaſe " are to be included,) he has performed ſuch things in " conquering obſtinate chronic diſeaſes, which chiefly " had their long and fixed ſeat in the weakened ſyſtem " of the nerves, as ſpaſmodic, convulſive, hypochon- " draic, and hyſteric affections, which others had in " vain tried to accompliſh by medicines elegantly " compounded, and judiciouſly adminiſtered, and he " himſelf had expected from medicines of great " fame."

And certainly the doctrine is perfectly true—medicine can do very little in a variety of caſes, without a ſtrict adherence to a well-adapted regimen—and in preventing the machine from being afflicted with a diverſity of maladies, nothing. The failure of all the arcana, ſpoken ſo highly of by a number of the ancients, as to be called panaceas—nay, the hands of Gods—indeed, thoſe ſupported by names of no leſs conſequence than FRIAR BACON, and LORD VERULAM, have proved how little dependence can be placed on the moſt extolled noſtrums—whilſt Cornaro, and ſeveral others of more modern date, have experimentally and inconteſtably proved what may be done in theſe points by a proper regimen, ſelected with judgement, and perſevered in with reſo-

lution—not only curing different obſtinate diſeaſes, which had reſiſted the force of the art of medicine, in the hands of the moſt well-informed and ſagacious practitioners, but inſuring a continuance of health in a green old age. For Cornaro ſays, " At eighty-three " I now enjoy a vigorous ſtate of body and mind—I " mount my horſe from the level ground—I climb " ſteep aſcents with eaſe; and have lately wrote a " comedy full of innocent mirth and raillery; when I " return home, either from private buſineſs or the " Senate, I have eleven grand children, with whoſe " education, amuſement, and ſongs, I am greatly " delighted; and I frequently ſing with them, for my " voice is clearer and ſtronger now, than ever it was " in my youth. In ſhort, I am in all reſpects happy, " and quite a ſtranger to the doleful, moroſe, dying " life, of lame, deaf, and blind old age—worn out " with intemperance."

Great as are theſe advantages—how happy ſhould it make us in our reflection, and how thankful to the benevolence of Providence ought we to be, that theſe, in a great meaſure, lay within our own reach; for enviable as are the bleſſings CORNARO enjoyed, he emerged from a ſtate of conſtant torment, by a ſteady adherence to, and uniform perſeverance in temperance, approportioning his regimen to the nature and exigencies of his *conſtitution only*—which is extremely worthy of imitation, as its conſequences will amply reward for any mortifications we may have to encounter in the beginning. In order to qualify ourſelves for which, we muſt proceed to inquire into thoſe ſources from

from whence he drew ſuch conſolation—and here we ſhall find, they all concentered in the proper uſe OF THE NON-NATURALS—ſo called, becauſe they affect man without entering into his compoſition, or conſtituting his nature—but yet are ſo neceſſary, that he cannot live without them—we ſhould rather term them neceſſaries—as they are things natural in themſelves, and to man's exiſtence neceſſary, and unavoidable. However, as our buſineſs in this place is to give information on material things, we ſhall refrain from verbal inveſtigation, as of little moment—and conſider them in the following order—ſhewing their manifeſt qualities, and explaining their perceptible effects. They have been divided into ſix heads, viz.

1. Air.
2. Aliment.
3. Exerciſe and Reſt.
4. Wakefulneſs and Sleep.
5. Repletion and Evacuation.
6. Paſſions, and Affections of the Mind.

But before we enter on a full diſcuſſion of theſe ſeperately, we muſt obſerve, that theſe ſix might, with great propriety, be reduced to four—as exerciſe and reſt produce pretty nearly ſimilar effects on the conſtitution, as wakefulneſs and ſleep—hence might theſe not improperly be reduced to one head, allowing ſomething more to exerciſe, than wakefulneſs, becauſe of the muſcular motion employed in the former.

As for repletion and evacuation, they, we ſhall find, more properly belong to the claſs of diſeaſes, as theſe

being too profuſe or too ſparing, conſtitute morbid affections of the habit.—However, we ſhall ſpeak of each in their place, agreeable to their arrangement—and firſt of

AIR.—And here we mean not to enter into philoſophical or chemical ſubtleties of the nature of this fluid, but confine ourſelves to that of the atmoſphere, whoſe different ſtates and changes produce perceptible effects on the conſtitution—and which all ages have conſidered as one of the occaſional cauſes, and that very material, of health or diſeaſes, according to its good or bad properties, affecting the body by inſpiration, as well as its circumambiency. It is a fluid poſſeſſed of ſpecific gravity, elaſticity, and tranſparency, and compreſſible—it ſurrounds the earth, and when agitated, or driven in currents, forms wind: it is extremely ſubtile, penetrates, and mingles with every part of the body, and by its elaſtic property, gives an inteſtine motion to all the fluids, and a lively ſpring to all the fibres, which promote circulation: it is never abſolutely pure, but always mixed with heterogeneous particles, and that air which we call pure, is ſuch as is not overcharged with any ſteams.

It has its varieties, and differs with reſpect

1. To its weight or levity.
2. Heat or coldneſs.
3. Dryneſs or moiſture.

And 4. Purity or impurity.

Now theſe properties of the air ſeperately, or by their different combinations, produce many unpleaſant effects

fects on the conſtitution—give riſe to and aggravate many ſymptoms in particular complaints—as well as are the origin of many diſeaſes themſelves.

1. For *if the air is too heavy*, it produces inflammatory affections of the membranes in the cheſt and lungs, called pleuriſy and peripneumony, head-ach and giddineſs, &c. by preſſing upon the ſurface of the body—obſtructing the pores of the ſkin, hence impeding perſpiration—accelerating the motion of the blood—occaſioning it to crowd on the internal parts, and there circulate too rapidly—hence it is impelled too forcibly upon the lungs, and too copiouſly upon the brain—impeding, indeed, the natural functions of thoſe organs which lie remote from the ſurface of the machine.

2. If *it has too much levity*, its elaſticity is increaſed, and hence produces, by vaſcular diſtenſion retarding the circulation of the blood, and by diminiſhing the reſiſtance of the fluids contained in the pulmonary veſſels, diſcharges of blood from the lungs—hyſteric, and hypochondriacal affections—rheumatiſm—gout, &c.

3. Should *the air be too hot*, by rarefying the humors, and weakening the fibres, it increaſes the circulation, and augments perſpiration, in which it is greatly aided by its additional ſtimulus on the vaſcular ſyſtem—whence acrimony is induced in the remaining fluids.

If *too cold*—local inflammations—as quinſeys, pleuriſies, peripneumonies, are brought on by over diſtending the lungs from its gravity—increaſing the tone of the veſſels by conſtringing their fibres—condenſing

or thickening the humors—and leſſening perſpiration. And ſhould this ſtate of the air ſuddenly ſucceed too long-continued heat—ardent, bilious, and other fevers are the conſequence—by producing its effects on the conſtitution, where the blood is in too rarefied and acrimonious a ſtate, and the humors participating of that acrimony with which the ſanguinary maſs is ſo replete.

4. *Too dry an air* ſhrivels up the ſolids, incraſſates or thickens the fluids, and diſpoſes to febrile affections —whilſt too great *moiſture* in that fluid, relaxes, and debilitates, leſſens perſpiration, renders the blood too watery—and by theſe means becomes extremely injurious, laying the foundation for coughs, aſthmas, dropſies, intermittent and nervous diſorders.

From the combination of ſome of theſe different qualities of the air, different affections found their origins.—Coldneſs and moiſture are offenſive, we find, to the conſtitution—but heat, moiſture, and levity, are more pernicious, becauſe theſe, acting together, ſupply the habit with a putreſcent tendency, from whence many of our moſt dangerous complaints ariſe, as vomiting and purging of acrid bile, called cholera, bilious looſeneſs, malignant ſore-throats, and putrid fevers.

5. The *purity and impurity of the air* depends upon the greater or ſmaller quantity of heterogeneous particles; theſe are particles which belong not to the air in its natural ſtate, which float in it—hence it has, beſides the above evident qualities, others which eſcape detection by the ſenſes, though from their deleterious

or

or miſchievous effects, ſufficiently manifeſt—ſuch are from infections of various kinds—as ſmall-pox, meaſles, ſcarlet fever, &c. malignant effluvia, exhalations, &c.

With regard, however, to the ſalubrity of the air, we muſt obſerve—that is moſt ſalutary, which is *pure*, *dry*, and *temperate*, untainted with noxious damps, or putrid effluvia, from any cauſe whatever; but the ſureſt mark of good air in any place, is from the longevity of its inhabitants.

The evident marks of a bad, or inſalubrious air in any houſe, are dampneſſes, or diſcolouring of plaiſter or wainſcoat;—mouldineſs of bread, wetneſs of ſponge, melting of ſugar, ruſting of braſs or iron, and rotting of furniture:—and nothing is more conducive to render air noxious, load it with putrid ſteams, and breed bad diſtempers, than permitting common and crowded burial places to be within the precinct of populous cities; or numbers of poor people living in uncleanlineſs, collected together in ſmall houſes, or narrow ſtreets.

Valetudinarians experience the moſt agreeable ſenſations when the wind is weſterly, though when at north, or north eaſt, it is accounted bracing and healthful. Indeed ſo powerful an effect has the influence of the winds, agreeable to the quarters in which they were fixed, been ſuppoſed to have, that it has been aſſerted, our diſpoſitions and tempers are greatly affected by them;—long continued eaſterly winds make people, who are naturally cheerful, very irritable and moroſe. Nor does our tempers being affected

fected by the different ſtates of air, ſeem at all improbable, inaſmuch as the body and mind are linked together in ſuch cloſe and intimate bonds of union, that they reciprocally affect each other: for as corporeal affections will, we know, alter the natural diſpoſitions of people—making the placid and ſweet tempered, often petulant and peeviſh—the courageous, timid, fearful, and irreſolute—the moſt patient, reſtleſs and unquiet—the lively and volatile, languid and deſponding—and the moſt active, indolent;—ſo may the air, as it conduces to throw the conſtitution into ſtates nearly morbid, produce, in ſome degree, ſimilar effects—as has been repeatedly experienced by men, not diveſted of obſervation.

A weſt wind, in general, is eſteemed the moſt ſalutary—then a north-weſt—after which ſucceed, in degrees of ſalubrity, in the following order—eaſt, north-eaſt, and laſt, ſouth and ſouth-eaſt—and theſe may be accounted for, from the different qualities of the air, in proportion to the exceſs or deficiency of heat, coldneſs, moiſture, dryneſs, weight, or levity — or the different noxious or contrary combinations they bring along with them.

From what has been advanced, the ſituation of our habitations will be a very material conſideration, in conducing to the preſervation of our health.

The moſt healthy expoſure, we have been told, in any place fixed for reſidence, is to be found by cutting one of the trees near the place where the houſe is to be built, tranſverſely with a ſaw, then cloſely to obſerve the rings which appear on the ſurface of the ſection; the

the ſide of the tree on which the diſtance of the rings from each other is greateſt, is the moſt healthful expoſure. And this is obvious, becauſe there has been the greateſt accretion of matter by the healthful diſpoſition of thoſe parts ſo made, from always being blown upon by air from the moſt ſalubrious quarter, which it faces, and being hid from that which comes from the oppoſite, which ſeems to produce a different effect—and it is an admitted fact, that in all places, or parts of a country, where vegetation is moſt vigorous, manifeſted by the ſtrength and richneſs of the vegetable claſs; there will alſo animals enjoy the ſame conſequences—hence ſhould the windows of the houſe, all other circumſtances being the ſame, have a ſimilar aſpect.

That houſe is conſidered as healthy which is ſituated on riſing ground, or ſide of a hill, and gravelly ſoil, becauſe it is leſs expoſed to damps and ſtagnant waters, in an open dry country; the rooms ſhould not be ſmall, but rather large—though not cold; the expoſure prudently adapted to the nature of the climate, but ſo contrived, that it may be perflated by the eaſt and north winds, whenever you pleaſe, which ſhould be at leaſt once a day—to blow away animal ſteams, and other noxious vapours;—but the air of the bedchamber, *eſpecially*, ſhould be pure and untainted, not near the ground, or any kind of dampneſs. We may in general conclude, thoſe ſituations are moſt ſalutary, where theſe different properties of the air commonly attend in degrees of mediocrity, ſteering in a medium between two extremes—nor will it be a ſmall addition,

if they are near a river or brook, whoſe ſtream is conſtantly running over a gravelly or ſandy bottom—for ſtanding water is always detrimental.

The country is more healthy than cities, or large towns, which are populous, from the greater purity of the air, if they are in ſimilar ſituations; but ſome countries are extremely unwholeſome, from the noxious vapours with which the air is impregnated—as thoſe near the marſhes of Eſſex, fens of Cambridgeſhire, or contiguous to lead mines, and ſmelting houſes; for in grounds cloſe to theſe two latter, animals which graze there are often deſtroyed, and vegetation greatly impeded: indeed the miners, ſmelters, and people in the vicinity, are ſubject to the dry or convulſive colic, and paralytic affections.

Theſe are the principal effects of the air—we muſt proceed to examine

2. ALIMENT;

Under which term is comprehended all thoſe eſculent animals, and vegetables, as well as liquids, by which we are ſupported, and which we uſe in common for the purpoſe of nutrition; and theſe are ſuppoſed to poſſeſs different degrees of nouriſhment, moſt of them having paſſed through ſome culinary proceſs, more or leſs adapted to our nature, before they are received into the ſtomach, but which have particular portions proper to be aſſimilated, and form parts congenial with thoſe of the human machine to which they are applied.

But

But before we enter on the particular nature of our various aliments, as we are writing to people who are not thoroughly converſant with the animal œconomy, it may be neceſſary to premiſe ſome account for their information, of the different proceſſes nature has affixed towards the completion of this aſſimilation.

As ſoon as the morſel is put into the mouth, it undergoes, by the teeth, and action of the muſcles of the jaws, a conſiderable diviſion, by the office of maſtication or chewing, in order that its texture may be broken, and mixed with a due proportion of ſaliva, before it paſſes into the ſtomach—ſome more fluid being acquired in its deſcent;—when it arrives at the ſtomach, it there gets blended with the juices of that organ, ſuppoſed, and proved by Spallanzolli, to be a powerful ſolvent of our food, and ſome ſmall portion of bile; and, during its reſidence there, experiencing the effect of heat, and muſcular action, from the coats of the ſtomach, and motion of the diaphragm, lungs, intercoſtal and abdominal muſcles, and the large blood-veſſels and parts which lay contiguous; it thence paſſes gradually over the pylorus, or lower orifice of the ſtomach, and there meets with the bile from the gall-bladder and liver in much larger quantity—the pancreatic juice, or that of the ſweet-bread, ſimilar to the ſaliva, but rather more viſcid—and the fluids ſeperated by the inteſtines; and here it is ſubſervient to the further action of the muſcular coat of the inteſtines, and their periſtaltic motion—churning, as it were, their contents, and minutely mixing and blending together, the food taken in; and the different

juices,

juices, which it has received in its ſtate of comminution and ſolution—from all which a milky juice is formed, called chyle—this is ſeparated from the fæculent ſordes, and taken up by a ſet of ſmall abſorbent veſſels called lacteals—which open upon the inner coat of the inteſtines, and paſs through the medium of the meſentery, which is the connecting membrane of the bowels, to the lower vertebræ of the loins, and there empty themſelves into a veſſel, called the thoracic duct, or receptaculum chyli—but there are, through the meſentery, various glands interſperſed, through which theſe lacteals paſs, and where the chyle is mixed with a thin lymph ſeperated there for this purpoſe, in order to render it more fluid. It is by theſe lacteal veſſels, the motion of the inteſtines, and the force of the circulation unavoidably carried forward to the thoracic duct, as it cannot regurgitate, on account of the valves in various parts of theſe lacteals, which prevent its retroceeding motion—becauſe they open only forwards—and are ſhut cloſer by any fluid preſſing backwards: thus then is the chyle thrown into the receptacle—which continues its courſe to the ſubclavian vein, along the vertebra—into which it enters, and from whence the chyle is poured, and thence immediately thrown into the right auricle and ventricle of the heart, where it mixes with the blood, and paſſes into the lungs—here it receives a conſiderable trituration, receiving material alterations from thence, and from what it receives from the atmoſpheric air inſpired into that organ;—from the lungs it returns through the pulmonary vein into the left auricle of the heart,

then

then into the ventricle—from whence it paſſes, mixed with the ſanguinary maſs, into the aorta, or large artery, and is diffuſed univerſally through the machine, where it is completed for the purpoſes of nutrition—being perfectly aſſimilated into the nature of animal juices—and by its proper application to particular parts, wanting the addition of nutrient fluids, renews what has been abraded, and thus keeps the machine in a ſtate adapted to the performance of its neceſſary functions, ſupplying portions proper for the requiſite ſecretions. By theſe various means is this aſſimilating effect produced—a contrivance, which nothing but divine and beneficent Wiſdom could be adequate to beſtow—for let the animal be fed upon food, ever ſo various, and diſſonant in their own peculiar properties, ſtill that power can convert materials ſo diſagreeing to the advantage of the creature feeding upon them; nay ſome, ſuch as goats and aſſes, will be nouriſhed by the products of nature—which, to horſes, oxen, ſheep, &c. prove the moſt fatal poiſon.

It is moſt probable that our firſt food was of the vegetable claſs, in the ſelection of which, man was directed by experience, led to it from the ſmell and taſte—and the ſupport and increaſe of ſtrength from thence conſequent, would confirm their uſe. But beaſts being troubleſome to the cultivators of the earth, and vegetable diet not being proper to ſupport ſufficiently thoſe who were employed in ſuch labour, the fleſh of animals made a neceſſary addition—of which we find a great variety at preſent are appropriated as common food, and the

catalogue of which luxury hath, in no ſmall degree, augmented.

Notwithſtanding food is required to repair thoſe particles which have been worn away, and diſſipated by perſpiration, ſtill a conſtant and quick repetition is alſo requiſite—for the blood, from its own diſpoſition apt to run into the nature of lixivial ſalts, continually approaches near to putridinous acrimony, from the circulatory motion and heat it perpetually ſuffers, by which the animal humors are greatly diſpoſed to putrefaction.

But the blood alſo from perſpirable matter paſſing off, acquires a diſpoſition to coagulate, and requires the reſtitution of the watery fluid—that its globules may be ſeperated, and preſerved in a ſtate of fluidity —and conſequently the reſt of the humors in a proper diſpoſition for ſecretion.

Theſe truths are demonſtrable, not only by their cauſes, but the appearance of men and animals, who die of hunger—for it is common for them to have an acrid, fetid, offenſive breath; their teeth looſened by corroſive ſaltneſs—violent pain in the ſtomach—acute fevers, and delirium.

The nutritious part of the food, from animals, conſiſts of a gelatinous lymph;—from vegetables of a farinaceous ſubſtance—in which is a portion of vegetable acid, oil, and ſaccharine or ſugary matter—conſequently, where the digeſtive powers are perfect, thoſe which abound moſt with ſuch matter in their reſpective claſſes, are the moſt nutritious.

But

But animal lymph, or the fineſt and moſt ſubtile part of the fluids, affords the quickeſt and ſtrongeſt nouriſhment, as it is nearly elaborated into juices ſimilar to our own; vegetables leſs ſo, as moſt of the eſculent roots, plants, and fruits, are of an aceſcent nature, few are alcaleſcent, or replete with ſtimulant or aromatic particles; few are poſſeſſed of gelatinous lymph, and only are nutritious from their farina—not many changing into thoſe humors called indigenous, or natural, after having paſſed often through the courſe of circulation.

Notwithſtanding which, it would be extremely improper for men to live alone on animal food—leſt a habit ſhould be induced too full of blood, and too replete with putreſcent juices—creating ferocity, ſcurvy, fætor, leproſy, and all kinds of lixivial corruption; as in the caſe among the anthropophagi, or thoſe who feed on human fleſh; all which miſchiefs, by change of diet, and living ſolely on vegetable food, are conquered.

Hence, in warm conſtitutions, hot climates and ſeaſons of the year, men who are indiſpoſed, as well as thoſe in health, have a greater propenſity to aceſcent vegetables, in proportion as the heat is more or leſs exceſſive—and hence men in very hot countries, commonly live on vegetables, ſeldom or not without danger, on animal diet; but in cold countries, the practice is ſafer, and more free from inconveniences: for this reaſon, bread, or farinous ſubſtances analogous to bread, is univerſally made uſe of; but we ſhould ob-

ſerve, that vegetable food, beſides its aceſcent property, is replete with fixed air.

From what has been ſaid of the nature of aliment, the utility of mixed diet, vegetable, and animal, will be obvious—as they are correctors of each other—hence likewiſe will be allowed, the propriety of uniting acids, or ſour ſauces with high-ſeaſoned diſhes, or eating them with the fleſh of animals, whoſe juices tend to promote ſaline acrimony—as fiſh, wild fowl, &c. and we may deduce alſo the following concluſions:—That ANIMAL FOOD *is moſt nutritious, heating*, and *ſtimulant, diſpoſing to putrefaction.*—VEGETABLE—*leſs nutritious, cooling, diluent, aceſcent, ſlightly aperient*, and *corrective.*

We muſt now advert to our third point—

3. EXERCISE and REST.

And when we ſpeak of exerciſe, we include that of the mind, with the body; for theſe two are ſo intimately connected, that they produce a variety of effects one on the other.

To exerciſe, the ancients have, as well as the moderns, indeed ever attributed great utility, particularly in purſuing it with propriety, and have allowed, that great conſtitutional miſchief may be derived from its abuſe or neglect.

It has with great juſtice been conſidered the ſole inſtrument of the cure of many diſeaſes, eſpecially thoſe of the glandular ſyſtem; and SYDENHAM had ſo high an opinion of it, particularly riding on horſeback, that he affirms, "Mercury for the lues venerea, nor

"the

" the bark for intermittents, are not more certain ſpe-
" cifics, than riding on horſeback for a conſumption;"
though here he ſeems to be too ſanguine in his opinion, and has given too great latitude to the ſalutary effects of this remedy; for, certainly there are caſes of conſumption where riding becomes injurious—but the conſideration of the ſubject belongs not to this place—we ſhall ſpeak more minutely of it, when we come to give particular directions on that complaint.

Exerciſe conſiſts in local motion of the body, and that motion more powerful of the limbs. It has been divided into ſerious, and amuſing: that belonging to labour is of the firſt claſs—diverſions the ſecond. GALEN hath written pretty copiouſly on the ſubject, and pointed out when it might be ſalubrious, and otherwiſe.

Severe exerciſe, when we exert quick motion, called gymnaſtic, extenuates the body; the contrary renders it groſs; long continued, diſſipates its moiſture, and occaſions dryneſs: moderate makes it fat. However, well-regulated exerciſe, we find, in general, produces a freedom of circulation, aſſiſts digeſtion, promotes perſpiration, and increaſes glandular ſecretion and excretion—by which we mean ſuch as is proportioned to the ſtrength—carried beyond that, it occaſions fatigue, and becomes inſtrumental in producing thoſe evil conſequences, it otherwiſe is calculated to remedy; for when too freely uſed, it is the ſource of loſs of appetite, great thirſt, loathing of food, heat in the bowels, coſtiveneſs, chillneſs, rigors, and fainting. And this muſt be the caſe, when we conſider the ef-

fects produced in the ſyſtem, by that which is judiciouſly adapted; as by increaſing the oſcillatory motion of the veſſels—that is, making their contractions and dilatations quicker, their contents are properly comminuted—all crudities deſtroyed—the blood rendered bland and mild—the ſordes, or groſs part, thrown out of the habit—the vaſcular ſyſtem ſtrengthened, by which the nervous power becomes equable in its action, and, conſequently, the ſolids of the animal firm, and the fluids pure.

The mind alſo has its influence, for though by its exerciſe it may be made ſtronger—ſtill, if not kept within proper bounds, it brings on fatigue, and hebetates, or renders the moving powers of the machine inert and dead. Hence the exerciſe intended to promote and preſerve health, ſhould be ſuch, as is united with mental amuſement, rather than labour—inaſmuch as in the former, the mind is exhilirated—will communicate agreeable ſenſations, and give firmneſs to the moving powers.

REST is alſo neceſſary to relieve both the mind and body; ſuch as is ſufficient to free the veſſels from the ſtronger exertions of their elaſtic force, recruit their ſtrength, and ſet the thinking faculties at reſt from their labour. But this, if carried to exceſs, becomes indolence, and lays the foundation for thoſe diſorders, which ariſe from inactivity—and this brings on univerſal relaxation of the ſolids—glandular obſtructions:—enervates the ſyſtem, vitiates the humors, creates pains in the ſtomach, flatulencies, indigeſtions, &c. and renders the affections of hypochondriac people, and

thoſe

thoſe who are gouty, in a great meaſure incurable.

From what has been advanced on this ſubject, the ſubſequent deductions may be drawn—

That EXERCISE and REST may be conſidered *mental* as well as *corporeal:* the FIRST, in moderate degrees, ſhould be eſteemed *properly ſtimulant, a ſtrengthener of the ſyſtem, promoting digeſtion, circulation, ſecretion, and excretion*; the SECOND, *reſtorative chiefly, but both in extremes, debilitating.*

The next of the non-naturals which preſent themſelves to our conſideration, are,

4. SLEEP and WAKEFULNESS.

And theſe produce nearly the ſame effects as the former—only muſcular force is leſs employed in wakefulneſs than exerciſe, and the animal receives moſt of his detriment from vaſcular action, and debilitating the nervous influence; and by too much ſleep the body is apt to become ſooner relaxed—have the mind more inert, and, conſequently, more liable to thoſe complaints which ariſe from univerſal indolence—though theſe, in moderate degrees, are eſſentially neceſſary and ſalutary; *for moderate ſleep* increaſes perſpiration, promotes digeſtion, cheriſhes the body, and exhilirates the mind—*whilſt the contrary extreme* renders the habit phlegmatic and inactive, loads it with crude humors, renders the vaſcular ſyſtem ſluggiſh and inert, diſpoſes the ſolids to relaxation, impairs the memory, and ſtupefies the underſtanding:—on the other hand, *exceſſive watching* diſſipates the ſtrength, produces fevers, dries and waſtes the body, and anticipates old age. It has

been thought that different ages of life, as well as conſtitutions, require more or leſs ſleep—for youth, or manhood, ſix or ſeven hours; for infancy, or old age, eight or nine; but the infirm ought not to be limited, they ſhould be permitted to indulge in ſuch a meaſure, as is found from experience neceſſary for refreſhment.

From the general effects produced by *ſleep* and *wakefulneſs*, they may be conſidered as nearly ſimilar to thoſe of exerciſe and reſt, and may alſo be conciſely marked down—as *ſtimulant* and *ſedative*—producing every good effect by their moderate uſe, and proper adaption; and a variety of miſchiefs by their abuſe, or exceſs.

The next in order follows the fifth ſeries—

5. REPLETION and EVACUATION.

But little can be ſaid relative to theſe in this place—for if what ſhould be evacuated is retained too long, or in too great quantity; if what ſhould be retained is evacuated too freely, they all conſtitute diſeaſes—and will be treated under their reſpective heads.

If perſpirable matter paſſes off not as it ought, but is obſtructed—plethora, or too great plenitude, fevers, head-ach, giddineſs, inflammations, &c. will enſue.

If what we eat lies too long on the ſtomach—indigeſtion, heart-burn, pains of the ſtomach, flatulence, &c.

If there is any retention in the lungs—coughs, inflammation, aſthma, &c.

If in the liver—inflammation.

In the gall-bladder—jaundice, &c.

In

In the bowels—coſtiveneſs, and its conſequences.

In the bladder—difficulty in making water, inflammation, &c.

As the retained matters, from their delay, may acquire different properties according to their nature, and may create diſorders conſiſtent with their acrimony, viſcidity, quantity, or weight.

If too great a flux happens from the ſalivary glands—it conſtitutes a ptyaliſm, or ſalivation.

If from the liver, pancreas, or ſweet-bread, or *inteſtines*—cholera morbus, or vomiting and purging of bilious matters, alimentary flux, white flux, looſeneſs.

If from the bladder—diabetes, or morbid efflux of urine.

If from the genitals—ſeminal gleet.

If from the ſkin—morbid ſweating, called ephidroſis, beſides a variety of others, which may produce general affections, either by ſympathy or acquired acrimony, as the nettle-raſh, infantile hectic fever, &c. And theſe retentions or evacuations are to be remedied by ſuch applications as the medic art affords. Nor need theſe have been mentioned here, only to ſhew their conſequence in the animal œconomy—as for the well being of the machine, it is neceſſary that parts where theſe retentions and evacuations occur, ſhould perform their functions properly.—Of theſe nothing more can be ſaid, we ſhall, therefore, advert to our laſt ſubject.

6. PASSIONS, and AFFECTIONS OF THE MIND.

Every man is truly ſenſible of the ill effects ariſing from giving way to thoſe variety of affections which we call paſſions; and fatal experience often convinces and makes them lament being ſo prone to act obedient to their impulſes. So ſtrongly do they affect the human machine, that the moſt ſurprizing conſequences have been known to originate from theſe ſources on the corporeal, or ſolid parts, as well as the ſyſtem in general.

There are innumerable inſtances of fear creating a ſudden and powerful action of the bowels and urinary paſſages. *Fright* has put off a fit of an intermittent, when all remedies had failed; a piſtol fired in the chamber of James the Firſt had this effect, occaſioning alſo a ſudden action of the inteſtinal canal downwards; it has alſo given riſe to an indiſſoluble tumor in a woman's breaſt; *exceſs of joy* has cauſed fainting and ſtupor; *anger*, induced apoplexy and phrenzy.

We cannot account for the preciſe mode in which theſe happen for a certainty. Hence, ſays a learned author, "We muſt content ourſelves with knowing "they are poſitive facts, for, till we are informed by "what means the mind and body are united, we can-"not even form a probable conjecture, how the ope-"rations betwixt them are performed."—In theſe caſes, however, I think that the peculiar ſtate of the conſtitution, with regard to its nervous incitability, vaſcular irritability or torpor, renders people more or

leſs

leſs liable to feel theſe impreſſions, if not totally, ſtill in a very great degree; for all thoſe, which we call nervous, are more ſubject to manifeſt the action of theſe ſudden or mental affections, than thoſe who have an apparent firmneſs of the nervous ſyſtem, and whoſe veſſels are not ſo irritable as very readily to feel the impulſes of their affections—to me it has appeared to be univerſally the caſe.

However, with reſpect to the paſſions themſelves, they may be medically reduced to two heads—*volatile* and *ſaturnine*; or *active* and *ſedative*.

But as diſquiſitions of this ſort would lead us more into the field of ſpeculative curioſity, than practical utility, I ſhall content myſelf with taking a quotation or two from a judicious writer on this ſubject—and from thence make the application to aſcertain the propriety of the diviſion.

" Fear, grief, and thoſe paſſions which partake of " them—as envy, hatred, malice, revenge, and de- " ſpair, are known by experience to weaken the " nerves; retard the circular motion of the fluids; " hinder perſpiration; impair digeſtion; and often " to produce ſpaſms, obſtructions, and hypochondri- " acal diſorders; and extreme terror has ſometimes " brought on death."

Theſe I term—*ſaturnine* or *ſedative*—becauſe they affect the nervous ſyſtem in ſuch a manner, as to impede its influence in general—conſequently, the action of all thoſe parts that are dependent upon it, and where any of them ſeem to act ſupernaturally, that action is occa-

occaſioned more by irritability, or pre-diſpoſition of the part, than from any other cauſe.

" Moderate joy or anger, on the other hand, and " thoſe paſſions and affections of the mind, which " partake of their nature—as cheerfulneſs, content- " ment, hope, virtuous and mutual love, and cou- " rage in doing good, invigorate the nerves, accele- " rate the circulating fluids, promote perſpiration, " and aſſiſt digeſtion:—but violent anger, which dif- " fers from madneſs only in duration, creates bilious, " inflammatory, convulſive, and ſometimes apoplec- " tic diſorders, eſpecially in hot temperaments—and " exceſs of joy deſtroys ſleep, and often has fatal and " ſudden effects."

Theſe I term *volatile* or *active*—becauſe they ſo affect the ſyſtem of the nerves, that they increaſe its influence—conſequently the action of all the parts dependent upon them, which, whilſt moderate, produces ſalutary effects; but when too violent, neceſſarily deleterious, or dangerous ones, from too great an exceſs of action.

Hence, though we cannot influence the mind in the particular manner we wiſh always, we ſhould endeavour to raiſe ſuch ſenſations, as may be productive of thoſe purpoſes, we are deſirous by other means of promoting.

Where the action of the vaſcular ſyſtem is too violent, we ſhould attempt to inculcate fear—where too torpid, cheerfulneſs; for theſe may, in ſome degree, have effects on the moving powers.

In

In treating of the non-naturals, though we have ſpoken of the ſolid aliments by which we are nouriſhed, we have not ſaid any thing of the liquids we in common uſe, we muſt, therefore, in order to render our labour completely uſeful, advert to them, as much benefit is to be derived from a thorough knowledge of their properties and effects, and no ſmall degree of miſchief avoided.

It is indeed a melancholy conſideration to reflect, that, though health is the only foundation of all pleaſure, and may, by eaſy methods, be preſerved, men ſhould neglect theſe means, which would enable them to purſue their darling Goddeſs through all her varied ſcenes of rational delight; but ſo it is, for notwithſtanding innumerable authors have written profeſſedly on the diætetic regimen, from the unwillingneſs valetudinarians have in complying with rules, which lay a reſtraint upon the gratification of their appetites, though calculated to preſerve health, it has been too much neglected.

Election treats, Pariſh dinners, Seſſion and City Feaſts, and free luxurious indulgence, have numbered many with the dead, which proper abſtinence might have preſerved. However, as men will not refrain, but rather become ſlaves to exceſs, duty calls upon us to apprize them of their danger, at leaſt to inform them in what things they may exceed with the leaſt poſſible inconvenience. In addition, therefore, to what has been already advanced, it appears neceſſary to take a ſurvey of the properties of thoſe liquids we in common

drink

drink—which have been conſidered with regard to their powers—as either

DILUENT, SHEATHING, NUTRITIVE, STIMULANT, ANTISPASMODIC, or SEDATIVE, which in their order we ſhall now attempt to explain.

1. The DILUTING LIQUORS—are all ſuch, as added to the circulating maſs of fluids, renders them more fluxile—by producing no other effects than what ariſe from mere mixture and diviſibility of the integrant parts, and ſolution of the acrimonious and ſaline particles therein inherent.—Of this claſs, therefore, we conſider

Water, *Small Beer*, and *Tea*.

The former of which appears to be the moſt eligible beverage, as it is free from ſaline matter, and abounds not with air, in ſuch a proportion as might occaſion fermentation: that is preferable which flows from mountains through ſandy ſoils; is the coldeſt, limpid, moſt light, and inſipid to the taſte—as it is better calculated to afford a well-diluted chyle: but of all, *that* which is diſtilled is the moſt eligible, as being thrown into a ſtate of vapour by heat, it is diveſted almoſt totally of thoſe earthy, heterogeneous materials with which other waters are apt to abound—hence, conſequently, in its pureſt ſtate.

This fluid, beſides thinning the blood, and diſſolving the ſaline and ſcorbutic acrimony of the juices, renders the circulation eaſy and uniform by attenuating any viſcidity; it reſtrains, by its coolneſs, the quick motion, and intenſe heat of the humours, moiſtens,

and mollifies rigid fibres—and if a glaſs of cold water is taken going to bed, it promotes perſpiration, and often brings on gentle ſweats.

Good ſmall beer has the ſame properties, but is more apt to occaſion fermentation from the ſaccharine ſubſtances with which it is, though ſlightly, impregnated, and is more viſcid—and from theſe it may be conſidered as rather more nutritious.

Tea is alſo a proper diluent, and aſſiſts digeſtion, drank a proper time after dinner, where it does not diſagree with the ſtomach, as in ſome peculiar conſtitutions, affecting the nerves of that organ, and the ſyſtem of them in general, ſo as to occaſion ſickneſs, tremors, and fainting.

2. Thoſe liquids are called SHEATHING which are mixed with mucilaginous ſubſtances, and produce their good effects, by involving the acrimonious particles of the blood—increaſing its viſcoſity, and preventing them from producing, or at leaſt leſſening their ſtimulating powers on the vaſcular ſyſtem in general—or guarding the ſtomach and inteſtines from feeling the effects of any irritating materials which may be therein contained—the principal of which are *water* mixed with oatmeal or wheat flour, called *gruel*—or with hartſhorn ſhavings, ſalop, ſagoe, tapioca—and boiled till the mucaginous parts of theſe are diſſolved, and then are conſidered as emollients or demulcents—or where ſubſtances are replete with oleaginous particles, ſuffering ſimilar ſolution in the ſame menſtruum—hence partake they alſo of a nutritious property: here then to the liſt may *chocolate* be

added

added—*fat broths*—*milk mixed with ſuet*—the laſt, a food not uncommon, and very uſeful to ſuch as are ſubject to conſtant diarrhœa, or looſeneſs, from acrimonious humours poured upon the bowels—which is improved by the addition of a little ſtarch—and all theſe are conſidered much more nutritious than thoſe of the former claſs.

3. The NUTRITIOUS—are all ſuch whoſe particles are capable of being aſſimilated to the nature of the animal juices by the digeſtive powers of the conſtitution, and partake of theſe properties in a greater or a leſs degree, as their parts approach nearer to, or are more diſtant from, the nature of our fluids, before they are taken into the habit:—hence the moſt nutritious are—*beef*, *mutton*, or *veal tea*, as replete only with the finer juices—*ſoups*, *broths*—the ſoups ſometimes, in the firſt digeſtion, are more ſtimulant, owing to the ſpices with which they are ſeaſoned, conſequently the moſt heating. Any of theſe above, however, made from the fleſh of the older animals, are moſt nutritive—as they partake leſs of vegetable nature, and have their juices more perfectly elaborated, and leſs ſubject to promote viſcidity, than thoſe from the younger ſpecies—and here may be enumerated *thoſe made from hartſhorn, or the jelly from that and iſinglaſs.*

The next is *milk*, which approaches very near to the nature of chyle, whilſt in the breaſt of the animal, though more cloſely allied to its perfect juices. It is diviſible into ſerum or whey, cream, curds—of which laſt is formed common cheeſe.

Milk

Milk when cold loſes ſome of its finer parts, and boiling robs it of more, by more copiouſly diſſipating them: it is demulcent and nutritious, and partakes of a middle nature, between vegetable and animal, and is apt to curdle on the ſtomach, if it meets with a ſtrong acid, too ſuddenly, or in many febrile diſorders.

To ſome conſtitutions it is perfectly agreeable, creating no uneaſineſs, be the ſtomach in what ſtate it may; ſtill in others it increaſes acidity in the firſt paſſages—it, in ſome, produces diarrhœa—others it renders coſtive; in ſome it occaſions the head-ach; in others an uneaſy ſenſation in the ſtomach, and pain—and many cannot enjoy the leaſt eaſe, till it is ejected by vomiting: but where it agrees, no food can be more pleaſant or ſalutary, where it does not increaſe corpulency. It has been the food of ſeveral adults for a ſeries of time—and thoſe who refrain totally from animal food, in this acquire an agreeable ſubſtitute.

The milk of an healthful young woman is, to the human frame, infinitely the moſt preferable, ſo is that of any animal to thoſe of their own ſpecies, as more completely finiſhed to their particular nature.—For medical uſe next ſucceed, the milk which has the greateſt affinity with that of woman—in which reſpect theſe are thought to purſue the following order—*aſſes*, *mares*, *goats*, that of *ſheep* and *cows*.

The next which ſucceeds to this—is

Chocolate—though it partakes not of animal nature, ſtill from its being more replete with oil and ſaccharine ſubſtance, it is not only nutritious but demul-

cent—though it is apt ſometimes to ſit uneaſy on the ſtomach, if it is made too thick, or not well milled or ground—but more particularly when the nut is badly prepared, or when it is decayed, greaſy, and rancid—made thin, it is light: therefore when chocolate, from its richneſs, creates any uneaſy ſenſations on the ſtomach, a glaſs of water taken afterwards, by rendering it more dilute, will prove a remedy—but from its abounding with a quantity of oil, it requires the powers of digeſtion to be very active for its aſſimilation: hence, it ſhould never be drank in too large quantities at a time. The leaſt nutritious of this claſs are ſome of the ſheathing liquids we before mentioned, as *gruels*, *ſago*, *ſalop*, *tapioca*—becauſe they partake ſolely of vegetable nature, and are not ſo replete with oleaginous or ſaccharine ſubſtances, but are merely mucilaginous.

4. The STIMULANT are—

Coffee, *wine*, *punch*, *perry*, *cyder*, *ardent ſpirits*; taken in moderate quantities—in larger, they exert ſedative effects perceptibly; but as we conclude they always exert this laſt effect, though in a degree only proportionate to the quantity taken, we think it right to take a view of them in their ſtate of combination to avoid perplexity—and therefore we mark them down as

STIMULATING *and* SEDATIVE.

The firſt of which conſiſt of ſuch materials, as by their active powers, irritate the ſtomach, occaſion warmth there, communicate it to the conſtitution in general, either by ſympathy or vaſcular irritation—increaſe the cir-

circulation of the blood for a time—exhilirate the ſpirits, increaſe perſpiration, and invigorate the whole ſyſtem—or, taken in large quantity, produce ſuch effects ſympathically upon the common ſenſorium, or force the blood ſo copiouſly and powerfully upon the brain, that it is incapable of feeling the effect of pain or rather uneaſy ſenſation—indeed, ſometimes this inſenſibility may be carried ſo far from this cauſe, that people become apoplectic from the increaſed preſſure on the brain—or from impeding ſympathically, or mechanically, the power of nervous influence, expire.

Of this claſs, we conſider

Coffee—though never attended with any of theſe violent conſequences, muſt be ranked under this head, as one of the ſlighteſt kind—for it is of a more heating nature than tea—gently ſtimulant, aſtringent, and reſiſts putrefaction; it alſo moderates alimentary fermentation—though, like tea, it is not agreeable to every conſtitution; as in ſome it will produce, particularly in thoſe who are delicate, nervous ſymptoms: it decreaſes corpulency, and is ſerviceable to groſs, phlegmatic habits.

Dr. Cullen, ſpeaking of coffee and tea, ſays,

" Their effects, in my opinion, are very much " mixed, depending on the warm water;—the " aſſiſting digeſtion—relieving the ſtomach from a " load of aliment—from crudities—alleviating head-" achs ariſing from them—promoting the ſecretion of " urine, and, perhaps, perſpiration, may all fairly " be attributed to the warm water. Theſe are the " chief virtues to be attributed to tea and coffee.

" The weakening the tone of the ſtomach by fre-
" quent uſe—and the ſyſtem, in conſequence, in-
" ducing tremors and ſpaſmodic affections, are the
" effects of the tea itſelf, though, in ſome meaſure,
" of the warm water." And, certainly, great miſ-chiefs are done by drinking them too hot—a very common practice by very delicate conſtitutions; for, by theſe means, the ſtomach is brought into too great a ſtate of relaxation—indigeſtion occaſioned—crude chyle thrown too freely into the habit—obſtructions formed in various parts, and a general ſtate of debi-lity, with a variety of painful conſequences, occaſioned through the whole ſyſtem.

Wine, *ſpirits*, *ale*, *porter*, *cyder*, *perry*, *punch*—may all come under the ſame deſcription with regard to their powers, if we make ſome allowances with reſpect to a few trifling peculiarities which occur; for they all of them are ſtimulants to the ſtomach and ſyſtem in general; poſſeſs ſome antiſpaſmodic powers, and increaſe circulation.

Spirits are more powerfully ſtimulant than wine, leſs antiſpaſmodic, and not diſpoſed to run into the acetous fermentation.

Wine is endowed with ſtronger antiſpaſmodic ef-fects; cyder and perry next; porter and ale the leaſt. Wine is more powerfully ſtimulant than theſe; leſs diſpoſed to acidity, if pure, than cyder and perry—and all of them free from that tenacity or viſcidity in ale and porter.

Ale and *porter* are apt to load the ſtomach more, and require ſtrong digeſtive powers to aſſimilate them:

porter

porter is ſuppoſed to poſſeſs ſtronger diuretic effects than ale—though they all have them in ſome degree —but amongſt the ſpirits, that called Geneva ſhews them the moſt manifeſtly—of which the common ſort, formed of ardent ſpirits, impregnated with terebinthinate ſubſtances, is the ſtrongeſt—thoſe impregnated with juniper berries the weakeſt.

But, as we can never get wine, though ſo valuable an article, whether conſidered as a luxury, or a medicine, completely perfected, even that eſteemed the moſt pure; and as it is made ſuch general uſe of—it will be advantageous to examine the parts of which it conſiſts, by which means, we ſhall be enabled to diſcover how its action may be varied; and, perhaps, the ſame holds good in all the reſt, except ſpirits, though moſt probably in an inferior degree.

WINE has for its baſis ſaccharine ſubſtances, of which it is formed by the proceſs of fermentation, which converts the whole, not at once, but progreſſively, into a vinous fluid; one part remains unaſſimilated—one is aſſimilated—and one becomes acid.

Hence wine is compoſed of three parts,

Muſt, *pure wine*, and *vinegar*.

Muſt, HIPPOCRATES deſcribes the juice of grapes, recently expreſſed, crude, flatulent—only having one good property, it is aperient; and if it does not act as a laxative, it becomes ſo much the more noxious to the body. It is, perhaps, owing to this that new wines, or other fermentable liquors, drank too early, prove ſo purgative as they generally do.

Some authors have ſaid, that *muſt* is, properly ſpeaking, what is called *ſweet wines.* It ſhould, with more propriety, be conſidered as ſomething different, formed by the fermenting proceſs; becauſe, by fermentation of ſugar on the ſtomach, a ſubtile fluid, called by the ſcholiaſts, gas ſylveſtre, and conſidered by them as a fixed, factitious, and fixable air is produced, which acts on the bile, proves laxative, &c. But *muſt* acts in a leſs quantity than ſugar, and therefore muſt be ſomething altered from the ſaccharine ſubſtance, now changed in its properties:—whatever it is, *it deſtroys the tone of the ſtomach—diſpoſes it to ſpaſmodic contractions, and, conſequently, diſturbs and interrupts digeſtion. If acidity is produced, it will join with the gas ſylveſtre in weakening the ſtomach—the acid thus formed will unite with the bile, produce a ſtrong ſtimulus—thus occaſion a flow of mere bile to the inteſtines, and cauſe what is called the cholera morbus, a copious evacuation of bile upwards and downwards, with violent ſpaſmodic affections*—but theſe effects are ſeldom produced to ſuch a degree of vehemence.

The active part of the juice of the grape is called ALCHOHOL, or *the ſpirit of wine*, but weakened in its action in its compound ſtate. *This exerts itſelf on the nervous ſyſtem, chiefly, if not altogether, by means of the ſtomach; hence it is ſtimulant, increaſing circulation, and the force of the nervous power univerſally.*

In large doſes—ALCHOHOL DESTROYS THE MOBILITY OF THE NERVOUS POWER—WHENCE, FROM ITS STIMULANT AND SEDATIVE EFFECTS—*confuſion of ideas and delirium*; STILL REPEATED, *the nervous flow*

is arreſted—voluntary and involuntary motions deſtroyed—ſleep, lethargy, apoplexy, and *death,* are the conſequences.

In WINES, the effects are almoſt never ſo rapid, on account of their dilute ſtate, and ſmall doſes in which the alchohol is thrown in; on which account it proves only more ſtimulant and exhilirating—it may produce ſtupor, but as it is apt to be rejected by the ſtomach, and by other matters with which it is mixed, the powers of alchohol is moderated.

PUNCH, which is only an artificial wine, is leſs noxious than alchohol and water, though more ſo than wine.

Though an acid is evolved, and enters into the compoſition of wine, and alchohol, ſtill another, and more copious and ſeperate, is formed—which is

VINEGAR.——This commonly contains ſome ſugar, *may be laxative—have the effects of unconverted ſweet wine—generate gas ſylveſtre,* that ſubtile fluid; and, *in ſhort, have all the properties of freſh juice:* when thoroughly converted, *it determines other vegetable juices to aceſcency—weakens the ſtomach—proves ſpaſmodic—and has all the conſequences of acids there generated.*

But combined with wine, theſe qualities are more innocent; as the action of muſt, alchohol, and vinegar, ſeperately, may prevent each other's ſimple and deleterious effects; and alſo the water may, in the proportion in which it is mixed, have its efficacy in weakening the properties of the other component parts.

CYDER and PERRY may be conſidered as having the ſame properties, though in much leſs degree than wine, with regard to their ſtimulant and ſedative effects; but are more replete with acidity—generate too great degrees of flatulency, run quicker into the acetous fermentation, and produce uneaſy gripings, and more painful ſenſations of the bowels, beſides being more productive of calculous complaints, and the convulſive colic, or dry belly-ach, terminating often in palſy.

From this review we can eaſily judge of the effects, whether advantageous or otherwiſe, which are likely to enſue from wine, and alſo from the different compoſitions ſold by our retail venders and wine merchants, under that title; which produce diſagreeable conſequences to thoſe who drink freely of it---laying the foundation for a variety of dangerous, lingering, and fatal complaints. In order to ſhew which, we have been at the pains of going more minutely into this ſubject, that we might explain the particular parts of which wine was compoſed---declare the properties of them ſeperately---manifeſt what were ſalutary, what otherwiſe; as alſo the neceſſity of a proper combination to form their utility; and hence be enabled to diſcover how the poiſonous compoſitions, ſold under that appellation, muſt invariably produce their baneful effects; for theſe are made of the unfermented juices of ſome vegetables—ſweet raiſin wine, cyder, and Britiſh ſpirits; and this jumble is coloured with ſome ingredients agreeable to the wines intended to be imitated---with the addition, ſometimes of a

ſmall

ſmall portion of wine, and conſtantly of that noxious material called ſugar of lead, or lead itſelf, forming this ſubſtance by the union with a portion of acid they contain. Now compounds like theſe muſt be replete with thoſe miſchiefs which we have enumerated under *muſt* and *vinegar*—and others brought on by the ſedative aſtringent powers, occaſioned by preparations of lead—rendering the action of the ſtomach and inteſtines torpid, relaxing theſe organs, obſtructing the exit of materials which ought to be thrown out of the body—filling the machine full of crude and acrid humors—contaminating the whole maſs of fluids—and preventing digeſtion, that parent of almoſt all chronic diſeaſes. When we, therefore, ſpeak of wine, we would not be underſtood to mean theſe baneful compounds: but that which is pure, as can be imported, which MACKENZIE ſays, "is an admirable liquor, "and, uſed in moderate quantity, anſwers many pur-"poſes of health; and beer, well brewed, light, of a "proper ſtrength and age, if we except water and "wine, is, perhaps, the moſt ancient and beſt ſort "of drink in common uſe among mankind."

But with reſpect to wine we may carry the matter much further, for it is generally allowed to be the moſt agreeable and powerful cordial we can have recourſe to in the laſt ſtage of ſome fevers, completing of itſelf the cure. In low, nervous, and putrid fevers, it is beneficial throughout—when there appear ſymptoms of great debility—and it may be very often taken in large quantity, where the moving powers of the ſyſtem abate much of their ſalutary action, and the

fluids

fluids ſeem to be running rapidly into a ſtate of putreſcency.

How much, therefore, is it to be lamented, that we ſhould be deprived of ſo valuable a liquor---replete with ſo many uſeful properties, by the avarice of a ſet of beings, who are ſuffered to impoſe upon, and injure the public with impunity, and amaſs fortunes, by ſelling poiſons for our deſtruction, inſtead of wine for our preſervation and recovery of our health. For, I am perſuaded, thouſands have fallen devoted victims to this illicit and infamous practice. In lieu of theſe, where people are under the neceſſity of purchaſing wines, rather than depend upon the *worldly integrity* of theſe dealers, I would recommend the wine properly made of raiſins, or the fruits of our own country, they are infinitely leſs noxious, nay, indeed, may be made equally efficacious to the others in their purer ſtates.

5. The next which are to be ſpoken of, are thoſe inveſted with

DILUTING *and* NUTRITIVE POWERS.

And theſe are chiefly all thoſe where water abounds, and are impregnated with farinaceous, ſaccharine, and animal ſubſtances; in which will be included, *gruels* and *weak broths*—the latter of which, as alſo *ſoups*, when thrown into the habit, may be conſidered as poſſeſſing ſome degree of ſtimulus, adequate to the nature of animal food in its ſolid ſtate, but weaker in degree; and theſe will be more or leſs diluting and nutritious, in proportion to the quantity of water and other ſubſtances

ſtances they contain—the diluent property depending upon the former—the nutritious upon the latter; the particulars, relative to each of which, may be collected from what we have delivered in our firſt and third ſection on this ſubject.

6. Our laſt are,

The NUTRITIVE, STIMULANT, *and* SEDATIVE;

Such as, in ſome degree, poſſeſs theſe ſeperate properties—which may be confined to

Ale and *Porter*—the ſtimulant and ſedative powers of which have been ſpoken of when we treated of wine, of which theſe may be conſidered as ſpecies, made of malt—though to porter there is a mixed and ſtrong ſedative power, inaſmuch, as it appears to have ſome narcotic ingredient infuſed it, as the *coculus indicus*, the Indian berry, *opium*, or ſome materials of a ſimilar nature. However, that they are very nutritious, needs no arguments to prove, we have only to depend upon facts; for it is obſervable, that all who drink copiouſly of theſe liquors, are corpulent, if they have powers of digeſtion adequate to their aſſimilation—common porters, coal-heavers, chairmen, &c. chiefly exiſt on this—drinking ſome gallons in a day; and indeed ſuch, whoſe labour is very ſevere, require it: but in all ſuch, it is neceſſary for their digeſtion to be extremely good, for theſe liquids abound with a great ſhare of viſcidity, which requires great conſtitutional ſtrength, and ſtrong labour to ſubdue. To delicate, relaxed habits, whoſe ſtomachs are weak,

they

they create great load and oppreſſion, much heat, and febrile affections temporarily induced.

What we have here delivered, perhaps, may be by ſome thought of too trivial conſequence; and is by many too much, even in the practice of medicine, neglected—ſtill will be found, on experience, worthy of very cloſe attention: for the knowledge from thence to be collected, and properly applied, as we ſhall ſoon have occaſion to ſhew, forms one part of medicine, comprehending that which is ſtiled—prophylactic or preventive—is, in many caſes, ſolely curative, and ſhould in all go hand in hand with the adminiſtration of the more active and powerful remedies in the cure of diſeaſes. Indeed ignorance in theſe points, or an injudicious diætetic courſe, will counteract remedies the moſt ſalutary on the one hand, whilſt, on the other, an accurate knowledge, and proper combination, will greatly add to their efficacy.

Having now laid down the principles on which we ſhall proceed through the courſe of the ſubſequent work, almoſt ſolely, in that part which is intended as the preventive, and, in a great meaſure, in the curative---we ſhall proceed to the former, after recapitulating ſome particulars, in order to form general rules for our proceedings, and render all our directions eaſy and intelligible.

SECTION

SECTION VI.

CONSTITUTIONS MORE PARTICULARLY SPECIFIED.

WHEN ſpeaking of Conſtitution in our former Sections, we have enumerated that variety which is generally adopted, in order to ſhew what ought to be underſtood by the different terms, and by what conſtitutional cauſes they were produced—and have divided them into *ſimple* and *general*—*mixed* and *general*—and *peculiar*---as

The ſtrong and robuſt,
Weak, relaxed, and delicate,
Nervous, or incitable,
Irritable,
Torpid,

And their combinations—that is, the union of two or more, as they happened to be poſſeſſed of incitability, irritability, and torpor; and theſe could only occur, with reſpect to the ſolids—but as the fluids alſo are concerned, it was neceſſary to take them into the account; we therefore conjoining them with the former, with reſpect to their quantities, qualities, and effects—have ſtiled them MIXED—as when aſſociated with

Plethora,
Acrimony,
Heat,
Cold,

Or having Conſumptive tendency. As for thoſe we denominated *peculiar*, they depended on accidental circum-

circumſtances, as a review will convince us, and unneceſſary to be taken into the general account, as to thoſe alone muſt our modes of prevention, mitigation, or cure, be directed; for it is by regulating their opetions alone, that we muſt in all caſes expect to derive benefit. Some alſo of which may be omitted, as they deduce their origin from particular affections of the other in combined ſtates, as the *hot*, *cold*, and *conſumptive*.

We, therefore, ſhall arrange Conſtitutions under the following heads.

A. The ſtrong, and robuſt.

More or leſs irritable, } Plethoric,
——— torpid, } Acrimonious.
——— incitable. }

B. The weak, relaxed, and delicate.

More or leſs incitable, } Plethoric,
——— irritable, } Acrimonious.
——— torpid. }

With reſpect, then, to the firſt of theſe Conſtitutions: 1. The *ſtrong*, *robuſt*, and *irritable*.

They are ſubject to many inconveniences, chiefly from the rapidity of the blood's motion; hence are liable to fall into violent continued fevers, and inflammatory diſorders. To prevent which, all exceſſes of hot or cold air ſhould be avoided; ſtimulating aliment, high ſeaſoned diſhes, and ſuch as are extremely nutritious; too ſudden and violent exerciſes, repletion, and the more boiſterous paſſions. They ſhould obſerve temperance in all things, and eſpecially keep free from immoderate drinking, and take care that

none of the natural evacuations, ſhould be checked, or obſtructed, ſuch as that of perſpiration, urine, fæces. They ſhould have recourſe to occaſional bleeding, when the head feels loaded, giddy, or when they are drowſy, and prone to ſleep, or ſymptoms of general fullneſs are prevalent, but not uſe it unneceſſarily, or too frequently, and empty the habit now and then by purgatives; they ſhould drink diluting liquors, as water, or ſuch where that is ſuperabundant; in general be ſparing of animal food, and rather eat freely of vegetable diet, for theſe are apt to be plethoric, or loaded with too great a proportion of the ſanguinary maſs: for ſuch, a moderate, warm, and moiſt atmoſphere is the moſt eligible ſituation; in fine, nothing ſhould be allowed them that will increaſe too powerfully the action of the living ſolids, or occaſion too great an increaſe of the fluids. Theſe Conſtitutions are in general warm.

2. The *ſtrong*, *robuſt*, and *torpid*.

Where, though the ſtamina are firm in too great a proportion, there is a defect of irritability the vaſcular ſyſtem being in too torpid a ſtate. Theſe require not any particular attention, as from the want of proper ſenſibility they will not be expoſed to feel particular changes ariſing from common cauſes, or ſuch as would affect thoſe which are more irritable. Theſe conſtitutions bear all evacuations well, as they are not apt eaſily to have their ſolids too much relaxed, but are rather prone to become plethoric, from indulgence, which they are apt to run into, from not feeling thoſe effects, which people of different habits ſo frequently experi-

experience. They ſhould endeavour to prevent an overfulneſs, either by abſtinence, or proper evacuations, which they bear in general without inconvenience, though bleeding in theſe is leſs adviſeable than purging, owing to the torpid ſtate of the ſyſtem; and, which, being neglected, ſhould a plethora be the conſequence, ſome of the internal parts of the habit, as the brains; lungs; &c. might be affected by dangerous, or at leaſt troubleſome oppreſſions, and we very often find men of this Conſtitution for want of timely care, and from indiſcretions, afflicted with ſudden vertigos or giddineſs of the head, coughing, or ſpitting of blood, apoplexy, &c. and theſe are ſometimes of a cold habit, though plethoric, and apt to fall into hypochondriac affections from viſceral accumulations, and languid circulation.

3. The *ſtrong*, *robuſt*, and *incitable*.

This Conſtitution ſometimes, though more rarely occurs, and when it does, it generally is united with vaſcular torpidity. In this there is too great incitability of the nervous ſyſtem; and men of this habit are ſubject to a mixture of hyſteric, and hypochondriac diſeaſes; iraſcible at trifles, deſponding nearly approaching to melancholy, they are apt to be afflicted with various ſpaſmodic affections, particularly of the throat, inteſtines, and ſtomach; ſometimes make profuſe quantities of pale, limpid water; at others, ſmall, but turbid and high coloured; they are frequently tormented with flatulence, and perplexed with whimſical and inconſiſtent ideas; the extremities are generally cold, and moving from place to place, or any

motion almoſt is performed with languor—moſt of the evacuations are leſſened, or irregularly performed; ſleep is imperfect, they are troubled with frightful dreams, and are ſubject to the incubus, or what is called the night-mare, and all theſe are derived from the ſame conſtitutional ſources, when torpor attends; for from the want of due power of the muſcular fibres, the circulation of the blood is not carried on with full freedom to the extremities, the internal parts conſequently are loaded, hence in thoſe parts there is an additional fullneſs and ſtimulus, for the ſtimulus is always in proportion to the quantity of blood flowing to a part or collected in it, from the evolution of the heat, and the ſuperabundance of acrimony, for the fluids of theſe conſtitutions generally abound with acrimony, particularly ſuch as is productive of the nettle-raſh; hence, then, the internal parts become more ſenſible to the nervous influence, conſequently ſolicits it the more freely; and hence ariſes the appearances above enumerated.

In theſe habits—frictions on the extremities, warm cloathing, warm bath, riding on horſeback, are eſſentially neceſſary; generous diet, wine, ſtimulating vegetables ſhould be adhered to, food of eaſy digeſtion, the mind ſhould be kept perfectly at eaſe, cheerful company, change of ſcene, and ſuch amuſements as divert the attention, and produce a moderate degree of mental hilarity, ſhould be procured; and as for medicines, they ſhould be ſuch, as at the ſame time, that they allay the incitable power of the nervous ſyſtem, diffuſe a general warmth through the habit, and

theſe given occaſionally, as aſafœtida, muſk, vitriolic æther, camphor, but all opiates muſt be avoided, becauſe they are apt to render the muſcular fibres too torpid—in general chalybeates may be perſiſted in, and Bath waters ſhould be recommended.

But where inſtead of torpor, vaſcular irritability is a concomitant, beſides being ſubject to inflammatory complaints, and continued febrile affections from ſlight cauſes, they are ſubject to permanent ſpaſmodic affections, ſuch as thoſe which are denominated by medical men, tetanic complaints, where, when ſpaſms or convulſions ariſe, the muſcular fibres remain in a fixed ſtate, not contracting and relaxing alternately, nor fugitive as in common convulſions: theſe are liable to be ſeized with a locked jaw, and continued muſcular rigidity. In theſe conſtitutions, warm baths are peculiarly uſeful, gentle and conſtant exerciſe, cooling diet, and copious dilution with aqueous liquids, thin aceſcent wines, milk and vegetable diet, evacuations of all kinds ſhould be conſtantly and moderately produced, particularly perſpiration, and the body ſhould never be coſtive; I have ſaid moderately, becauſe in endeavouring to abate the irritability of the ſyſtem, we muſt be careful not to increaſe the incitability, which is apt to be the caſe, from evacuations too copious. Opiates are in theſe habits extremely uſeful, and may be freely given under particular circumſtances. With regard to regimen, what we have ſaid before in the beginning of this ſection may be adhered to, taking eſpecial care to avoid all mental

uneaſineſs. Theſe conſtitutions are apt to be plethoric and attended with heat.

What we have delivered appertains to thoſe who are conſidered to poſſeſs ſtrong degrees of muſcular firmneſs, differently combined. We muſt now proceed to ſuch as have a WEAK, RELAXED, DELICATE HABIT, JOINED WITH TOO GREAT INCITABILITY. And this circumſtance generally occurs in theſe habits, that they have alſo too great a ſhare of irritability. Theſe are ſubject to painful and ſpaſmodic diſeaſes; and the more delicate ſex of this conſtitution are prone to hyſteric affections from the relaxation and irritability of their habits. They alſo are conſtantly attacked on every ſlight cold, with ſlow fevers, and have their digeſtive powers loaded with ſaburra, or different kinds of ill digeſted matters in the ſtomach and bowels, making their way into the habit in this noxious form.

To theſe, a dry, clear air is eſſentially neceſſary, moderate exerciſe, particularly riding, cold bathing, and chalybeate waters; animal food eaſy of digeſtion, and free from fat, and a temperate uſe of aſtringent wines. Vegetables ſhould be adminiſtered ſparingly, and thoſe of the leſs flatulent kinds; food and liquids, viſcid and tenacious, ſuch as flour puddings, potatoes, oyſters, ſtrong ſoups, and malt liquors, ought to be prohibited. Every thing calculated to ſtrengthen the tone of the ſyſtem, and preſerve it in an equable ſtate ought to be had recourſe to, and all things likely to weaken it muſt be deſiſted from. Cheerful company and moderate amuſements are ſerviceable, but pur-

ſued too freely, the reverſe; for all fatigues, both of body and mind, are prejudicial—the cuſtom of taking vegetable acids too copiouſly is alſo pernicious—hot tea, or any thing drank too warm—for theſe all contribute to relax and load the ſtomach and inteſtines, with foul, viſcid materials, which produce therein internal ſtimulus, create flatulence, and communicate general irritability through the ſyſtem. Blood ſhould never be taken from people of this habit, but upon the moſt urgent occaſions, and then only ſparingly, in which cupping is preferable to the lancet; and it is ſafer to take it away at two operations, than at one, ſome little diſtance of time from each other, if more than ſix ounces ſhould be required. All ſudden changes ſhould be avoided with the utmoſt caution, either with reſpect to cloathing or diet, the mind kept free from anxious cares—hence watering places are uſeful, where thoſe impregnated with chalybeate particles, or iron, may be drank: in fine, every thing ought to be adviſed, which, in a moderate degree, can exhilirate the ſpirits, and contribute to give ſtrength to the ſolids. Theſe conſtitutions are generally warm, ſubject to irregular fluſhing heats, and have for the moſt part no ſmall degree of acrimony in the habit. But there are ſome who poſſeſs too great a ſhare of torpidity, and then they form that kind,

2. Where a WEAK, RELAXED HABIT IS JOINED WITH A DEFECT OF SENSIBILITY; and theſe are ſubject, not only to nervous affections, but to chronic and deſtructive diſeaſes; for the circulation in all theſe is languid, and the abſor-

bent

bent ſyſtem acts not with proper freedom. Hence will ariſe thoſe complaints which depend on an acrimonious ſtate of the humors, and an accumulation of the fluids in the whole, or particular parts of the ſyſtem—as dropſy, jaundice, corpulency, ſcorbutic complaints, green-ſickneſs ſo called, obſtructed menſes, glandular tumors, &c.

In theſe torpid habits, ſtimulants are uſeful, as alſo are evacuants; to theſe, a dry air and high ſituation are moſt ſuitable, with a generous diet of the more pungent claſs—ſuch as the juices of the older animals, fiſh, muſtard, horſeradiſh, cabbage, and all of that claſs: briſk exerciſe on horſeback, emetics, and frequent purging, in order to ſhake the vaſcular and and glandulous ſyſtem, prevent accumulations, remove obſtructions, hinder the bile from ſtagnating, and the mucous fluids from collecting. All the natural evacuations ſhould be kept free from ſuppreſſion, to accompliſh which, the ſyſtem ought to be perpetually rouſed to action; hence indolence and indulgence in bed is to be particularly avoided; the thinner ſtimulating liquids, as white wine diluted with water, ſhould be the common beverage, and the mind kept in a ſtate of cheerful activity, free from all gloomy and deſponding reflections.

Were the rules here laid down obſerved before our maſs of humours had been contaminated by indiſcretions and various ſpecies of debaucheries, which weaken and diſturb the ſyſtem in its performance of the proper offices allotted to her various parts, perhaps there would be little occaſion to conſider of thoſe

thlngs, which are neceſſary to prevent diſeaſes ariſing from a default of the *natural* humors of the machine; but as that is not the caſe, they call upon us for our conſideration, as well as thoſe which are fortuitouſly thrown into the Conſtitution. And thoſe we ſhall divide into ſuch as are firſt,

NATURAL,

And thoſe which are

ACCIDENTAL.

The natural fluids are diviſible into

General,

or

Partial.

§. 1. In the firſt or general, the blood offends by its too great quantity or ſtate of acrimony. From the too copious ſtate of this fluid, a variety of complaints may ariſe, and, therefore, when ſymptoms of oppreſſion appear from this cauſe, which will generally manifeſt itſelf by languor, a ſenſe of weight or fullneſs in the head, when riſing in the morning from bed, or in ſtooping, and fullneſs alſo of the pulſe; abſtinence, indulging leſs than uſual in ſleep, increaſing the natural evacuations, and uſing more exerciſe, will effectually reduce the body to its proper ſtandard, if theſe things are had recourſe to in due time, and perſevered in for a proper period; the diet ſhould be the leaſt nutritious, more of the vegetable than animal claſs, the laſt eat of ſparingly, confining themſelves to one diſh, and having it only once a day, and water ſhould be the only beverage; but ſhould inanition, or a want of a proper quantity of blood be induced by any cauſe, nutriment

ſhould

ſhould then be given of the moſt quick and eaſy digeſtion—as teas, and broths made of the fleſh of older animals, thin jellies, and the fleſh of the younger animals, as chicken, rabbits, lamb, veal, &c. and in ſuch quantities, though that can be readily converted into chyle—for it is a miſtaken notion, to ſuppoſe the larger the proportion of nutrition thrown into the habit, the ſooner it will be recruited; the reverſe will happen, for by theſe means the digeſtive powers being overloaded, will be weakened, and conſequently even a ſmall portion be prevented from being properly aſſimilated, or reduced to the nature of our own healthful fluids, which they muſt be before they can anſwer the purpoſes for which they are intended—as on the contrary, if ſo much is only given as thoſe powers can conquer, they will gain freſh ſtrength every day, by the application of that which has been converted into a nature peculiarly adapted to the end propoſed; and this quantity may be repeated as often as the conſtitution requires it. By this a further waſte will be prevented, which may alſo in this view be aſſiſted by the uſe of ſtomachics, which chiefly conſiſt of bitters—as gentian, orange peel, quaſſia wood, ſlight chalybeates, gentle aromatics, and ſuch like.

§. 2. But the blood may become acrimonious, and this acrimony may be conſidered of different natures. They have been divided into *acid*, *putreſcent*, and *muriatic*, ſo called from MURIA, brine, a liquor made of common ſalt, which this muriatic humor is ſuppoſed to reſemble; but we ſhall not pretend to advance this as a certainty, but confine ourſelves to the

effects of ſome acrimony, which ſeems different from the two former.

The *firſt* then, or the *acid*, is ſuppoſed to ariſe from weak bowels, and particularly obſervable in our infantile ſtate, and, perhaps, the ſtomach and inteſtines are the only place where ſuch acidities are to be found. To prevent which, we muſt endeavour to ſtrengthen the digeſtive powers that they may make good chyle; hence after clearing the bowels with the ſal polychreſt, or ſmall doſes of calomel and rhubarb, and gentle emetics,—ſlight doſes of chalybeates may be had recourſe to, mixed with rhubarb to keep the bowels gently open—weak broth ſhould be given once or twice a day—panada, with a ſmall portion of ſome agreeable aromatic well boiled; and ſuch things as have in themſelves the leaſt tendency to acidity; frictions on the abdomen or lower belly, ſtomach, legs, and feet, with ſmart exerciſe, will be highly ſerviceable—as theſe will invigorate the ſyſtem, promote a briſk circulation, and increaſe the action of thoſe organs intended to promote the formation of good chyle.

The *ſecond*, or *putreſcent*; where the fluids tend to a ſtate of putridity, ſhews itſelf generally by the face being puffed up, as it were, and tinged with a hue, ſomewhat approaching to livid; the breath offenſive; the gums ſpongy, and bleeding on the ſlighteſt touch, nay, ſometimes voluntarily:--here freſh air, auſtere wines, ſuch as give a ſenſe of roughneſs, or aſtringency to the taſte, vegetable diet, ripe fruit, water impregnated with fixable air, ſmart motion, and corroborating bitters,

ters, with abſtinence from animal food, particularly fiſh, promiſe fair for ſtopping the effects, which might otherwiſe ariſe, by checking the putrefactive diſpoſition, and meliorating the fluids; moiſt, warm ſituations ſhould in this caſe be particularly avoided—and living in cloſe places much crowded with inhabitants—for nothing conduces more to bring on, and increaſe ſuch a ſtate of the conſtitution as theſe—by relaxing the ſolids, and furniſhing a conſtant ſupply of putreſcent effluvia.

The *third*, or what has been ſtiled the *muriatic*, is indicated by hot eruptions, which itch much, attended with uncommon thirſt and fluſhing heats; to alleviate which, the ſulphureous, ſaline waters are recommended, particularly thoſe of Harrowgate, Thorp-Arch, and thoſe of Moffat, avoiding at the ſame time all heating, acrid food—ſuch as turtle, high ſeaſoned diſhes, and rich ſoups—whey and milk in theſe caſes are extremely beneficial; the SCORBUTIC JUICES, made *of the juice of garden ſcurvy graſs, water creſſes*, both expreſſed from freſh herbs, and of Seville oranges, two pints, *ſpirituous nutmeg water*, half a pint, theſe are to be mixed together, and after they have ſtood till the feces have ſubſided, the clear liquor muſt be poured off for uſe.—Of theſe juices, from two table-ſpoonfuls to eight, may be taken two or three times a day; or a DECOCTION OF THE WOODS, made of *guaiacum*, or *lignum vitæ ſaw-duſt*, three ounces; *raiſins of the ſun*, two ounces; *ſaſſafras wood*, *ſhaved liquorice ſliced*, each an ounce; *water*, ten pints:—the guaiacum and raiſins are to be boiled over a gentle fire, to the

conſumption of one half, adding towards the end the ſaſſafras and liquorice; ſtrain off the liquor, and having ſuffered it to reſt for ſome time, pour off what is clear—a quarter of a pint of this may be taken two or three times a day, and all ſuch as are diuretic, and cooling; hence ſome of thoſe waters are of ſervice, which abound with ſaline ſubſtances, that are gently aperient, and move the urinary paſſages—as *Epſom waters*, thoſe of *Cheltenham*, *Stoke*, or *Jeſſop waters*, thoſe of *Pancras*, *Holt* in Wiltſhire, *Stretham*, and ſome others.

All coſmetics and repellent lotions are dangerous; for if the acrimony cannot be corrected or carried out of the habit, its moſt ſalutary ſituation muſt be external; and, perhaps, it may be the only means which nature has to unload the habit, or prevent the deleterious effects, which would be occaſioned, were any of the more noble organs ſubjected to the depredation of humors ſo inveterate. To valetudinarians of this deſcription, a cool air ſhould be recommended, and ſummer ſituation near the ſea-coaſt;—all ſalted meats and fiſh ſhould be prohibited; the body kept cool by ſaline aperients, and the mind unruffled by violent paſſions, and all exceſs in drinking refrained.

Theſe conſtitute the firſt claſs of natural humors—the ſecond are the

PARTIAL.—Where they only affect ſome parts of the conſtitution, and are not diffuſive, but produce particular diſeaſes from a peculiar ſpecies of morbific matter; and theſe are either generated in the habit ſpontaneouſly, or ſeem to ariſe from errors in diet, indulgencies,

dulgencies, or irregularities with reſpect to the management of the animal œconomy; but theſe, if incapable of being eradicated, may be alleviated, and in ſome degree prevented.

The FIRST of which we ſhall mention is the *gout*; reſpecting which, though ſo painful, ſo dangerous and common a malady, I believe little doubt remains but it may be weakened in its attacks, even in thoſe who have been long ſubject to it, by temperance; that is, by properly regulating conſtitutions conſiſtent with the powers they poſſeſs: and I am firmly perſuaded it may be prevented from returning in the younger claſs of mankind, would they, on its firſt onſet, preſcribe to themſelves and follow ſuch regulations, as experience has, in many ſimilar caſes, proved to be conducive to theſe ends.

Adhering ſtrictly to a milk diet has in many caſes put a ſtop to returns of the gout; and regularity of living, with proper exerciſe—abſtaining from wine and high-ſeaſoned diſhes, pickles, and other incentives, that ſtimulate the appetite, and occaſion men to overload, and weaken the tone of the ſtomach, and digeſtive powers, have rendered this malady infinitely more mild in its paroxyſms. Men, with this propenſity to the gout, ſhould avoid every exceſs that has the leaſt tendency to reduce the habit below the proper ſtandard of health—either in eating, drinking, or venereal enjoyments: for it is by the ſlaviſh and conſtant purſuit of theſe particulars, and the great indulgence which they allow themſelves, that we ſee ſo many martyrs to gouty devaſtation,

Early

Early riſing, moderate exerciſe, and that daily; bland, mild food: abſtinence from inebriating liquids, or a very moderate uſe of them, as alſo of concubinage, will ever be ſucceeded with ſuch conſequences, as will amply repay us for philoſophic forbearance.—People of this conſtitution ought to refrain from weighty cares—the labours of the mind—much thought, anxiety, and ſolicitude: they ſhould avoid all vexation, particularly as nothing diſpoſes more to bring on fits of the gout, by occaſioning crudity, and indigeſtion, from weakening and rendering the action of the ſtomach too torpid.

Various modes have been recommended for preventing the acceſſions of the gout—but what ſeems to have gained credit from the experience of ſeveral intelligent men, is the uſe of ſulphur; of which a drink is made by impregnating water with a proper proportion of it, and this has proved ſalutary, in not only mitigating fits of the gout, but ſome ſay of totally preventing their return. Indeed if we conſider the action of ſulphur on the habit, we ſhall not be averſe to think favourably of its uſe.

Dr. CULLEN ſays, "It is certainly a mild and "ſafe cathartic, never producing any conſiderable "evacuation, but keeping up the natural excretion "by the inteſtines, without any irritating or heating "effect."—And Dr. LEWIS—"That pure ſul-"phur, in doſes of from ten grains to a dram or more, "gently looſens the belly, and promotes perſpiration; "it ſeems to paſs through the whole habit, and ma-"nifeſtly tranſpires through the ſkin, as appears from

"the

" the ſulphureous ſmell of thoſe who have taken it, and " ſilver being ſtained in their pockets to a blackiſh " hue, as by the vapour of ſulphureous ſolutions."

But we muſt obſerve in this, as in every other conſtitution, we muſt be directed in our ſpecific courſe by the particular nature of the habit, according as it tends to one or the other, which we have before ſpecified. Hence in this caſe we muſt ſometimes enforce an abſtemious regimen altogether from animal food—ſometimes allow its moderate uſe, proportioning the degrees of exerciſe to the degrees of tone, or ſtrength of the ſyſtem, always prohibiting the uſe of wines and other fermented liquors, except in caſes of great debility, or long habit; and preſerving the ſtrength of the ſtomach and digeſtive organs.

2d. RHEUMATIC.—In theſe, the ſame rules will hold good as in the former, and not be attended with diſſimilar effects, and thoſe very often more certain; for it has ſometimes been prevented by wearing a flannel ſhirt, which keeps up an increaſed degree of inſenſible perſpiration, and uſing the cold bath or ſea-bathing without interruption.

3d. That diſeaſe, which in inland countries we ſeldom or never ſee affect the natives, called the PUTRID SCURVY—by exerciſe, warm cloathing, drinking aceſcent wines, and living chiefly on freſh vegetables, or eating freely of them, will be prevented. It generally affects thoſe who live on ſea-coaſts, and feed on fiſh, and ſailors:—hence ſour crout has been conſidered as preventive. I have heard captains of ſome ſhips ſay, great benefit has been derived from vine-

vinegar, and they give it the preference to lemon or lime juice—why, I know not, unleſs from the ſaccharine ſubſtance in vinegar, a degree of fermentation takes place, and affords ſome portion of fixable air, from whence poſſibly ſome antiputreſcent effects may be produced.

4th. Where we have reaſon to fear a *ſcrophulous* taint, or the ſeeds of that diſeaſe called the *king's evil* predominate in the habit—thoſe means exerted, which give ſtrength to the ſolids, begun in time, bid fair to act as preventive in this caſe; at leaſt hinder the offenſive matter from producing its unhappy effects in a violent degree.

Living in a free country air, particularly on the ſea-coaſt, taking exerciſe and nutritious diet; moderate uſe of wine, and a courſe of gentle chalybeates, or drinking the chalybeate waters once or twice a year, might anſwer the intention.

5th. Where there is a redundancy of bile, or a collection, thoſe conſtitutions, we have ſaid, are called *bilious*, and have often a bitter taſte in the mouth. The ſtomach and bowels of ſuch ſhould be always kept clear, by taking aperient medicines every now and then, and ſuch as are not likely to leave the body coſtive after the operation. In theſe habits, aloes and ſoap are uſeful, caſtor oil, ſaline purgatives—as Glauber or Epſom ſalt, or the natural purging waters—as thoſe of Thorp-Arch—Northaw—Colcheſter—Dulwich—Epſom—Acton—and Cheltenham.—Fat and oily ſubſtances ſhould be ſparingly, if at all thrown into the habit. Exerciſe ſhould be perſiſted in, and

ſome

ſome ſpecies of vegetable food preferred to any other, as the dandelion—endive—and ſuch like.

6th. The ſtomach and bowels are apt to be loaded with different kinds of noxious materials, called *ſaburra*—and theſe are either *acid*, *rancid*, or *viſcid*. In all conſtitutions that have one or more of theſe particular tendencies, they generally ariſe from weak, digeſtive powers. Emetics and purgatives are now and then to be preſcribed on that account, and thoſe things which give force to the weakened organ.

If the *acid* is moſt prevalent, which will diſcover itſelf by ſour belchings and heart-burn—animal diet is moſt proper; crude vegetables, milk, butter, and other oleaginous ſubſtances ſhould be foreborn, and alſo fermented liquors; the moſt proper drink is water alone, or warmed with a little ardent ſpirits, or having ginger infuſed in it—ſtomachic bitters with elixir of vitriol, or bark; abſorbent powders, as hartſhorn burnt and prepared, chalk, magneſia, are uſeful for immediate relief. In all relaxations of the ſtomach we muſt aim at ſtrengthening its tone, preventing fermentation, and promoting the expulſion of its contents;—the alkaline waters, as thoſe of Upminſter, Brentwood, Seltzer, and Tilbury, may be recommended.

If the eructations ſhould be *rancid*, or occaſion a *putrid, offenſive taſte*, called nidorous, like that of bad eggs, and nauſea attend, with the throwing up of liquids, that will blaze in the fire like oil; a diet containing a large proportion of aceſcent vegetables will be proper, with a very ſparing quantity of butter and oil—made

made diſhes ſhould not be allowed, nor rich ſauces, or much gravy—acid fruit, ſuch as are ripe may be indulged in, and water is generally the propereſt liquor to drink.

But if the matter ſhould be *viſcid* and *ropy*, that is there generated—ſuch things as will aſſiſt in dividing in carrying it off, are the moſt eligible—as calomel and rhubarb occaſionally, or aloetic purges—elixir proprietatis with bitters, or pilulæ Ruffi with Venice ſoap—exerciſe, chiefly riding, is neceſſary, and all things which have in their own nature too tenacious a viſcidity, ſuch as puddings, thick gruels, potatoes, ſhould be avoided—the fleſh or juices of older animals are preferable to thoſe of the younger ſort—and alſo vegetables of the warmer claſs, muſtard, horſeradiſh, water creſſes, &c.

And in all caſes where the digeſtive powers are too languid, where there is not too great an acrimony of the humors, and the habit is not liable to be heated from ſlight cauſes;—chalybeate waters, ſuch as Pyrmont—Tunbridge—Hampſtead—Iſlington,—and the ſulphureous, as Buxton—Bath—Aix-la-Chapelle—Harrowgate—and Llandridod, will always promote ſome good purpoſe in this reſpect, without being in others detrimental.

But ſometimes the lungs will be ſubject to be loaded with viſcid, tough kind of phlegm, in order to prevent which, the mode above laid down will be highly conducive, and what will contribute much towards being more ſucceſsful—are emetics taken occaſionally.

§. 3.

§. 3. Beſides what we have above deſcribed, there are fluids which get into the habit from contagion or infection, and will produce diſeaſe by the action of their morbid matter, if not prevented, before they have manifeſted their effect—and theſe we call

ACCIDENTAL.—The FIRST of which we ſhall take notice of, is that creative of the *lues venerea*—or *pox*; and where there is ſtrong ſuſpicion of having had commerce with an infected object, the malady may be prevented by ſuch applications, as will waſh off the natural mucus of the parts, and thereby carry away the virus, or venereal poiſon, which lies entangled in it: and theſe are ſolutions of the cauſtic alkali; ſoft or common ſoap, corroſive ſublimate, &c. in water, with which the external parts ſhould be well waſhed, as ſoon as may be after coition, at leaſt within the ſpace of ſix or eight hours; and ſome ſhould be injected within the urethra; but great care ſhould be taken not to make the ſolution too ſtrong, leſt the parts ſhould be excoriated, and inflammation brought on by that means, with its painful and diſagreeable conſequences. It will be ſufficient if the ſolution is of ſuch a ſtrength only, as will give a ſlight ſenſation of pungency on the tongue or inſide of the lips.

The SECOND—the *poiſon of the viper*.—The ill conſequences generally attending the bite of vipers, by which means they pour their virus into the wound, and ſo communicate it to the habit, have been prevented, it has been aſſerted, by the immediate application of the fat of that reptile to the wounded part.—It was, in the more early periods, conſidered as a ſpecific in that caſe—but olive oil has been known to anſwer the purpoſe full as effectually.—Theſe means

may alſo be uſeful in abating the pain originating from the ſtings of *waſps—bees—bugs—gnats*—or preventing the effects from burns, or ſcalds, before the ſkin is raiſed into bliſters; but the more effectual modes are the immediate application of ſpirits of hartſhorn, or of ſal ammoniac, or ſpirit of wine, and continued ſome time.

The THIRD.—The *ſaliva of a mad dog*, or *any other mad animal*, communicated by a bite, gives riſe to the moſt dreadful of all human calamities; and its effects, if not prevented, generally terminate fatally: but theſe have been ſaid to be warded off, by uſing the cold bath, and perſevering for ſome time in taking the PULVIS ANTILYSSUS,* a dram and a half of which was to be taken in half a pint of cow's milk in the morning, on an empty ſtomach, for four mornings together, and occaſionally perſiſted in, ſo much recommended by Dr. Mead—or applying to the Ormſkirk medicine; but theſe have ſo repeatedly failed, that I ſhould not depend upon them—but where people are ſtrongly wedded in opinion to theſe compoſitions, I ſhould adviſe their adminiſtration—but not till after the following mode had been completed:—Immediately after the wound was given, I would adviſe it to be ſucked ſome time, which may be done with the greateſt ſafety, the mouth of the operator being guarded with oil, for his ſatisfaction, and the ſaliva not ſwallowed; then the part, where it can, ſhould be cut out, or burnt with a hot iron, deeper, and more extended than the wound itſelf;—after which, the wound ſhould be filled with mercurial ointment, and a bliſter applied over the part—

* See p. 573—169. Lewis's New Diſpenſatory, 8vo. Edinb. 1786.

kept

kept open for ſome time—and mercury thrown into the habit, ſo as to raiſe, and maintain a ſalivation, for ſome weeks.—For by theſe means, the poiſon will be prevented getting into the habit; and ſhould a portion of it have made its way inwards, by the quick action of the abſorbent veſſels, it might be thrown out, by quickly and conſtantly promoting ſalivary ſecretion, and excretion.

The FOURTH.—The *noxious particles, which by infection occaſion malignant ulcers of the throat—putrid fevers—or dyſentery*—and which are generally uſhered in with ſhiverings, ſickneſs, and ſudden loſs of ſtrength, have had all their conſequent miſchiefs prevented, by the inſtantaneous exhibition of emetics; and ſhould theſe fail, ſo that the whole ſymptoms do not immediately go off, a large bliſter applied between the ſhoulders has commonly removed them.—Nurſes, in the naval hoſpitals have, it is ſaid, from the moſt undoubted authority, by this mode prevented miſchief.

The FIFTH, and LAST of which I ſhall take notice in this place, are *the putrid particles, apt to be taken into the habit, by perſons wounding themſelves by diſſecting of putrid bodies, or parts mortified*—and of which many inſtances have recently occurred, where the unfortunate, though praiſe-worthy, curious inquirers, have fallen ſacrifices to the deleterious effects.

In caſes where, under theſe circumſtances, wounds occur, I ſhould recommend ſucking the part immediately, and having it well waſhed with vinegar; then the application of ſtrong mercurial ointment, and mercurial purges, taken occaſionally at proper intervals; for I know of no medicines which ſo effectually

clear the ſerous, and lymphatic ſyſtem as mercury.—And in the intermediate days a courſe of antiputreſcent medicines and diet ſhould be perſiſted in—as bark—moderate quantities of wine—or vinous liquors—and vegetable diet—and bark may be very judiciouſly united with ſuch other materials as promote perſpiration, and theſe ſhould be inſiſted on, and perſevered in for ſome time, and I have little doubt but they would prove a ſecurity from future danger.

Having now delivered fully what may be thought neceſſary for underſtanding the nature of conſtitutions in their ſimple, and mixed general ſtate, and alſo peculiar, with the modes neceſſary to be purſued, in keeping them in an healthful ſtate, or of preventing diſeaſes, as far as reſpect theſe particular points; we would obſerve to the young practitioners, or thoſe who thirſt after medical information, or love to engage in practice from motives of philanthropy, where medical advice may be far diſtant, that the eye ſhould not only be carried to theſe conſtitutional points in caſes where prevention of diſeaſes is ſtudied, but particular attention ſhould be paid to them in diſeaſes, wherein they will be found altered from their natural ſtate, and ſome different combinations taking place from the effects of the malady itſelf; which deviations, when diſcovered, ſhould regulate the conduct; and it will be perceived that medicines highly proper in the beginning of a complaint, are as improper in the concluſion, and ſo on the contrary, and this alone owing to the alteration made in the habit: for inſtance, in inflammatory remittent fever, where at the onſet, the conſtitution is poſſeſſed of great firmneſs—

ſtrong vaſcular irritability—and equable nervous incitablity—to give bark would be madneſs, little leſs than butchery, becauſe it would too much increaſe the already too heightened powers, and occaſion the worſt conſequences; but at the latter end, or during the progreſs in its later ſtage, the ſame is a cure, owing to the conſtitution being altered by the violence of the diſeaſe at this time; for it loſes its firmneſs—increaſes vaſcular weakneſs—and induces too great nervous incitability, all which are conquered by bark augmenting the tone of the ſyſtem. But as we have examined particular conſtitutions in an healthful ſtate, and pointed out their variability, and ſpoken of ſome points neceſſary to be obſerved in our conduct, in order to preſerve them in that ſtate, we ſhall now make the application on a more extenſive ſcale.

SECTION V.

NECESSARY CAUTIONS *reſpecting* FOOD, EXERCISE, &c.

WHEN men are in a ſtate of perfect health, the moving powers of the conſtitution act in uniſon with each other, the force of one being in exact proportion with that of another, ſo that they perform their functions with eaſe and regularity—neither exerciſing themſelves ſuperabundantly nor defectively; the machine is lively and active—the thinking faculty alert and clear—the blood and humours are bland, mode-

rate in quantity, and free from acrimony, which may be diſtreſſing—the appetite is good—the digeſtion ſufficiently ſtrong—all the ſecretions and excretions performed in due order—ſleep ſound, and refreſhing—and no perceptible defect manifeſts itſelf in any of the vital, animal, or natural actions; and this ſituation of the machine is the greateſt bleſſing human wiſhes can deſire, and empowers man to enjoy every pleaſure of moderation and propriety, within his reach, with the greateſt zeſt and inward ſatisfaction. But unfortunately, men under theſe circumſtances often plunge themſelves into the oppoſite extremes, by imprudencies and indulgencies; for it muſt be obſerved, that the moſt perfect ſtate of health is not far diſtant from diſeaſe, and very often trifling indiſcretions lay the foundation for great miſchief, if the conſequences occurring from thence are not ſoon put a ſtop to; which, indeed, by a little care and attention, might frequently be prevented;—certain rules for which we ſhall endeavour to point out, which one would ſcarce think neceſſary, if we conſider the latitude given by CELSUS, to thoſe in health, did not experience every day convince us, that the documents he lays down require ſome reſtrictions.—He ſays, "A man, who is healthful, and at his own diſpoſal, "ought not to be confined to any particular regimen; "as he wants not the advice of a phyſician, his mode "of life ſhould be varied;—he ſhould ſometimes re- "ſide in the country, ſometimes in cities, but "oftener in the former;—he ſhould now and then "ſail, hunt, or live at eaſe, in perfect reſt;—he ſhould

"uſe

" uſe ſometimes the warm bath, ſometimes the cold;—
" eat, in common, all kinds of food;—ſometimes be
" in company and feaſt himſelf; ſometimes live re-
" tired, and abſtemiouſly;—*now and then take more or*
" *leſs nutriment than might be exactly proper*;—but re-
" freſh himſelf rather twice with diet, than once a
" day, and *that in a plentiful portion, if it can be concoc-*
" *ted*;—but though exerciſe and food in this mode are
" neceſſary, in inordinate degrees they are not ſer-
" viceable;—for buſineſs, preventing the exerciſe,
" which may happen on account of attendance in va-
" rious avocations, the body will be injured, as thoſe
" which receive nouriſhment in their uſual way, will
" quickly decay and become diſordered."

Though this latitude is given, we muſt obſerve it is only to a man in full vigour of health; but even here, during the ſtate of allowed indulgence, ſome caution becomes neceſſary, eſpecially againſt every ſpecies of exceſs; for it is a known and allowed truth, that exceſs of every kind, whether corporeal or mental, diſorders the human frame, and lays the foundation for a variety of complaints; even in thoſe things, a moderate ſhare of which is neceſſary for the ſupport of our machines—conduces to invigorate our mental powers, and promote our pleaſure.

In *eating* and *drinking*, this is an obvious truth, though in the latter it is much ſafer to exceed than the former; in proof of which, let us examine them.

We find that by drinking a quantity of vinous and ſpirituous liquor, in which all thoſe which cauſe ine-

briation are included; the vital principles, or that which ſupports life, and renders the machine active, is rendered extremely powerful by the ſtimulus applied partially to the ſtomach, or more diffuſively; the ſpirits are elevated, ſometimes even to madneſs; a more than common ſtreſs is laid upon the conſtitution; the habit becomes fuller ſo long as this ſtimulus continues, and liquor is poured into the ſtomach; which ſtimulus ceaſing from conſtitutional fatigue, the ſyſtem feels too much loaded and enervated; the ſtomach relaxed, and all the vital powers incapacitated to perform their functions properly: hence pain, ſickneſs, head-ach, languor, or a temporary fever, perhaps after a debauch, the whole, or moſt part of theſe inconveniencies are experienced.

To remedy which, lying in bed and plentiful dilution with watery liquors—as weak tea—ſmall broth—thin gruel, &c. ſhould be perſiſted in, to promote perſpiration; or recourſe ſhould be had to riding on horſeback, by which means the ſuperabundant load will be carried off, and the body reſtored to its proper tone. Either of theſe methods may be purſued, as is moſt agreeable to the conſtitution: the former I ſhould recommend to plethoric habits, and thoſe of a ſtrong ſtamina; the latter to the more relaxed whoſe ſtomach is generally in a weaker ſtate. Sometimes taking plentifully of the following:—One dram and a half of ſalt of tartar, called now prepared kali—four table ſpoonfuls or five of lemon juice—water which has been boiled, half a pint—brandy three or four table ſpoonfuls, and this ſweetened with ſugar: or if the ſtomach

mach is very weak, a dram and a half of aromatic confection, or two table ſpoonfuls of tincture of bark may be added;—a tea cup or more of which may be taken often in the day;—or what is better, the ſalt of tartar may be diſſolved in the liquid, without the lemon juice; and after every ſix ſpoonfuls drank, let a table ſpoonful of lemon juice be taken, and this repeated in the ſame manner;—or ſome warm and grateful cordial, as ratifia—uſquebaugh—brandy, mixed with peppermint water, may be adminiſtered, which will give immediate relief to thoſe whoſe ſtomach is affected with nauſea, ſickneſs, or oppreſſion, a common practice with men devoted to liquor; but this ſhould be had recourſe to only on very particular occaſions, for it is a cuſtom may be attended with diſagreeable conſequences, if too frequently uſed, becauſe the ſtomach, once accuſtomed to any particular ſtimulus, requires the conſtant repetition of that ſtimulus, which, in time, deſtroys its tone, and lays the foundation for thoſe maladies which ariſe from inebriation; and it is this which often induce men to turn drunkards: low ſpirited women, frequently from taking things of this ſort to exhilirate their ſpirits, are converted into ſhameleſs ſots, and become the diſgrace of their own ſex, and contempt of ours. However, this furniſhes one proof of the power which the ſtomach maintains over the ſyſtem in general; as by the ſtomach being ſtimulated, all that laſſitude—languor—nauſea—ſickneſs—and every uneaſy ſenſation attendant on its relaxation, are removed, except heat.

By excefs in eating, the ſtomach is apt to be over-diſtended—the digeſtive powers weakened—the veſſels filled with crude chyle—reſpiration retarded; hence a ſenſe of weight at the ſtomach—pain and flatulence—propenſity to ſleep—inactivity, and fullneſs of the head—obſtructed viſcera—jaundice—dropſy—aſthma—apoplexy—and a number of chronic complaints, if the practice is continued.

But if an error has been committed, and eſpecially if that has been with high-ſeaſoned diſhes, a draught of cold water, acidulated with elixir of vitriol, taken ſoon after eating, will relieve the ſtomach from that weight, with which it is often oppreſſed, aſſiſt digeſtion, reſtrain fermentation, and prevent flatulency; from hence, perhaps, the uſe of ices may be approved.

I remember an account given me of a dignified clergyman, who was ſo great a ſlave to his appetite, that he was obliged conſtantly to have recourſe to ſome application to prevent indigeſtion, he gormandized ſo abominably; as a proof of his gluttony, I cannot give it a gentler term, the following is recited of him:—He was invited to dinner, where every rarity the place afforded, was provided, of which he eat in his uſual manner; but the gentleman, with whom he dined, knowing he was extremely fond of veniſon, and being well acquainted with his diſpoſition, reſerved the haunch in ſucceſſion, of which he had advertiſed the reſt of the company; on its appearance, the already ſatiated divine, after expreſſing his ſurprize at not being informed of this luxury before, retreated into the yard, diſgorged the load he had before ſwal-

lowed, and returned to the attack of the veniſon, with his accuſtomed vigor and proweſs, to the aſtoniſhment of his companions. Hence we may infer, vomits in many caſes are alſo ſerviceable; however, at an early period, he became the victim of diſeaſe, and died of a dropſy, ſucceeding an irremediable jaundice, brought on from this mode of living.

With regard to our food, however, in quantity and quality, it ſhould be properly proportioned to our exerciſe. The farmer, who follows his plow, and is perpetually toiling from morning till night, could not exiſt on food appropriated to thoſe who purſue not the ſeverer exerciſe of the body; his diet muſt be of the coarſer kind—ſuch as old milk cheeſe—ſalted meats—bread made of rye—potatoes, &c. &c. and theſe in pretty large quantities. This food anſwers to him the purpoſes of nature, keeps his body in a ſtate of health, becauſe his digeſtive powers are very active, and form from theſe materials good chyle, on account of the occupation in which he is engaged; which in the more delicate and leſs laborious, or indolent, would occaſion great indiſpoſition. In Herefordſhire, and ſome other counties, men are not allowed fit for ſervice, nor get hired, without, as it is termed, they can bolt bacon; that is, ſwallow it unmaſticated, cut into pieces, about an inch and an half, or two inches long, and half an inch ſquare, or thereabouts, and this in tolerable quantities; and this is done in order that they may attend cloſely to their labour, without ſpending any time in taking in nouriſhment for their neceſſary ſupport; for bacon being fat, and of a firm texture, from being hardened

hardened by ſalt in its curing, will lie a long time in an undigeſted ſtate, by which means the cravings of the appetite are kept off, and the ſtrength ſupported.

But ſhould abſtinence be unavoidable, a man, during that period, ſhould not undertake any laborious employment; as in that caſe, the conſumption of the thinner fluids would be too great—the ſolids would be rendered weak, for want of proper ſupport, and the liquids diſpoſed either to form concretions, that is, degenerate into too thick maſſes, or run into a ſtate of putreſcent acrimony.

There is one cuſtom to which the generality of mankind are apt to be addicted; when they have ſuffered fatigue, and that perhaps ſevere, from hunting, ſhooting, cricket playing, walking, &c. they commonly indulge their appetites by eating copiouſly of ſolid food; and think it one of the benefits from thence ariſing, that they are enabled to throw down ſuch a load of groſs materials; nay, not content with this, they make them float in porter, ale, or ſome other viſcid liquor, and afterwards indulge themſelves with a jolly bottle; and this they think ſupported by reaſon, for where the machine is weakened, it ſeems natural to ſuppoſe it requires much refreſhment. If we examine the effects of ſuch indiſcreet conduct, we cannot heſitate to pronounce it erroneous, and condemn the practice: for after eating and drinking, in this manner, they grow dull and heavy; and general laſſitude comes on; the pulſe grows quick; the face fluſhes; a temporary fever ſucceeds; ſleep is diſturbed;

turbed; profuſe ſweats break out, or a too great general heat, with dryneſs of the ſkin, is perceptible; the mouth is clammy; thirſt is an attendant; and they riſe in the morning weary, and afflicted with pain, or ſtiffneſs in the joints, wanting that alacrity and activity they ought to poſſeſs, from the night's indulgence. Indeed, oftentimes a foundation is laid for infinitely more ſerious complaints, according to the peculiar nature of the fever; nay, ſometimes immediately brought on, ſuch as inflammatory or ſlow fevers—local inflammations—rheumatiſm, &c. Nor can it be otherwiſe, for all the vital, natural, and animal powers are weakened, and a load laid on nature in her debilitated ſtate, for her to conquer, before the vaſcular ſyſtem has recovered its ſtrength ſufficiently for the performance of ſuch an office.

Were they to confine themſelves to liquid food, or that ſort readily digeſtible, ſuch as weak broth, milk, light bread pudding, &c. with wine and water for their beverage, all theſe inconveniencies would be prevented; the body would only receive that nutriment it could readily digeſt, and the veſſels from not being over diſtended, and their actions too powerfully ſolicited by a conſtant ſtimulus, ſoon recover, by reſt, their natural elaſticity; then with impunity might they purſue their feſtive joy.

It is alſo prejudicial after ſuffering ſevere hunger, to eat immoderately—or after a full and conſtant feeding, to faſt abſolutely. Neither is running into the extremes of reſt and labour ſucceſſively, by any means attended with ſafety.

The

The conſtitution may be brought to bear many alterations, but theſe muſt be accompliſhed in a gradual manner, for few of any conſequence happen, but they occaſion an alteration in ſome of the ſolids of the ſyſtem, producing either a greater degree of extenſion or contraction—conſequently alſo a change is created in the fluids: and if any defect ſhould happen in one part, from the mode of producing thoſe changes, nature provides againſt ſuch defect by adapting ſome other parts to the performance of their duty, in a greater or a leſs degree, or a duty that is not naturally intended for them; as we ſee in the decreaſe of one evacuation, it often promotes the increaſe of another: and veſſels appropriated to the diſcharge of one fluid, will often emit another, as in caſes of obſtructed menſes, where blood has iſſued periodically from the eyes and lungs; ſo that all ſudden changes may be productive of a variety of complaints, not only on account of the parts being unaccuſtomed to perform their proper offices, and from want of uſe being rendered too weak, but want of time for nature to make ſuitable diſpoſitions, to alleviate diſtreſs ariſing from ſudden contingencies.

Therefore, if a man has laboured under ſevere hunger, his ſtomach will be in a ſtate of contractility, leſſened in its capacity more than uſual; loading it conſequently too heavily, will either occaſion vomiting, or uneaſy ſenſation of weight: heart-burn, perhaps inflammation, or a ſpaſm of both the orifices, or either of them—or miſchief might be created in other parts of the machine, from filling the veſſels, which muſt alſo

alſo be in too contractile a ſtate, too full of crude ill-formed chyle; for in this ſituation, neither the peculiar juices of the liver—ſweet-bread—nor thoſe of the ſtomach itſelf, can be ſeparated in their proper quantity, nor will be endowed with their natural qualities, ſufficiently perfected for the buſineſs of digeſtion—all which are abſolutely neceſſary for forming the nutritious fluid in a ſalutary ſtate.

And what on the contrary will happen, if a man, after full feeding, filling the habit copiouſly and conſtantly with liquids, ſhould ſubmit to abſolute faſting?

As it is neceſſary to keep up a plenitude in the veſſels, that the fluids may preſerve their power of reaction, as a ſtimulus aſſiſting powerfully the promotion of vaſcular contraction, and thus maintaining an eaſy and equable circulation, we from time to time throw in food to ſupply the defect of the fluids, which ariſes from the conſtant and natural action of the veſſels; and this not only conſtitutes a requiſite equilibrium, or neceſſary equality in the powers of the circulatory ſyſtem, but alſo ſupports a continuance of preſſure upon the brain, which is very material for the performance of its duty in the body; ſince we find in proportion as that organ is deprived of that preſſure, it performs not its functions regularly—hence convulſions—faintings—death; and we alſo find the more plethoric a man is in a ſtate of health, generally the more warmth he has in his habit.

Now

Now if a man is filled with fluids from eating and drinking inordinately, the conſtitution will act under the impulſe of increaſed ſtimulus.

Sudden and total abſtinence therefore would prevent the regularity of the brain's action, and render the ſyſtem languid from withdrawing the ſtimulus, by which it had been actuated—the veſſels would collapſe—circulation would be carried on with difficulty—the heart oppreſſed—and in the firſt inſtance, ſanguinary concretions might be formed. But ſhould the cauſe be permanent, the humors, for want of freſh ſupply of new fluids, would grow ſharp and acrimonious—general irritation take place—a fever enſue—an inflammation of the brain come on—and a delirium cloſe the ſcene.

Having examined the effects produced by ſevere hunger, and gratification of the appetite copiouſly and conſtantly, and ſuddenly changing from one to the other; let us now examine the conſequences of the extremes of reſt and labour, ſucceeding each other in the ſame manner.

And firſt—What will be the reſult if total reſt ſhould ſucceed hard labour?

The conſtitution being habituated by cuſtom to any particular practices, eſpecially where the motion of the ſolids are principally concerned, is ſo uſed to the impreſſions made by thoſe practices, that they become neceſſary to its welfare. Hence a man accuſtomed to hard labour, enjoys a better ſtate of health, under that circumſtance, than if he was to fall entirely into habits of indolence; for the ſyſtem being diveſted

of

of thoſe particular impulſes, uſual to be given, would experience a degree of torpor, or ſluggiſhneſs—the fluids conſtantly increaſed to ſupply the diſpendium or conſumption, having no occaſion to be appropriated to that purpoſe, would form collections in the vaſcular, glandular, and cellular ſyſtem—and hence would ariſe a variety of complaints from fulneſs, and corpulency—and a foundation be laid for numberleſs chronic diſorders.

And we may obſerve many men, retiring from avocations which require bodily activity into the arms of idleneſs, though poſſeſſing their health under former ſituations, plunge into diſeaſe—and numbers of them die apoplectic—paralytic—aſthmatic—or dropſical.

But, on the contrary, if men apply to hard labour ſuddenly, from a ſtate of abſolute reſt—the conſtitution will become languid, from want of proper ſupport, and be affected with different kinds of conſumptions, not of the lungs particularly, but gradual waſting away—dropſies—fevers, &c.—for the veſſels not having been ſolicited to ſtrong action, and the fluids, though abundant in quantity, not properly elaborated to repair the loſs ſevere exerciſe occaſions, the former will be weakened by a ſudden increaſe of action, and want of adequate ſupplies;—while the latter may form congeſtions in the head, or internal parts, by being puſhed ſuddenly forward, and too violently, and ſoon acquire a dangerous and noxious acrimony from crudity, or deficiency.

But though extremes in theſe particulars are highly injudicious, becoming the prolific parents of many

maladies, yet purſued under proper limitations, are replete with innumerable advantages—for exerciſe and reſt are the certain ſupporters of a pleaſurable life, as far as it depends on general health—Hence muſt we allow every ſpecies of the former very beneficial—but then it muſt be limited by the ſtrength—for when in proper proportion it gives conſtitutional vigour, and muſcular firmneſs—while inaction renders the body liſtleſs, and relaxed—and, indeed, if exerciſe is purſued to the diſtreſs of the natural powers, it creates a number of injuries, which its judicious uſe would inevitably prevent.

Beſides we muſt obſerve, that all exerciſe, of whatever nature, whether walking—running—fencing—riding on horſeback—or in a carriage—playing at cricket, tennis, &c. ſhould be adapted to the prevention of any diſeaſe the perſon ſo uſing it may have a tendency to fall into—to thoſe liable to fall into *gravelly complaints* riding on horſeback ſhould be recommended;—to have *collections of phlegm upon the lungs*, reading aloud—ſinging;—*thoſe ſubject to the gout*, walking;—*indigeſtion, or viſceral obſtructions*, riding; *ſubject to catch cold*, walking;—thoſe of ſtrong muſcular ſtamina, having *a ſluggiſh circulation and coldneſs*, playing at cricket or tennis;—to *hyſteric diſeaſes*, or *melancholic affections*, where the mind broods too much over imaginary calamities—driving a carriage—ſhooting—hunting, or ſome, where their reflection may be withdrawn from unpleaſant objects, &c.—and thoſe exerciſes which are more or leſs violent, ſhould be adviſed according to the ends we wiſh

to

to promote;—for the grand buſineſs of theſe are to increaſe the tone of the ſolids---make the different glands perform their functions; promote inſenſible perſpiration; and prevent the fluids from becoming detrimental to either by their thinneſs, viſcidity, or acrimony.

Exerciſe may be divided into theſe three degrees---the STRONGEST of which are,

Firſt—Playing at tennis, cricket, fencing, and running, &c. where great muſcular exertion is neceſſary:

Second—Walking, reading aloud, riding on horſeback, or in a carriage:

Laſt—Sailing, chamber-horſe, dumb-bells, and frictions:

which laſt are appropriated to old age, where muſcular force begins to grow effete; and are neceſſary for the preſervation of health, by promoting the circulation of the blood, and motion of the fluids, through the minute veſſels.

But *ſleep* is eſteemed the grand preſerver and reſtorer of health, ſuch as is well-timed, and properly proportioned; for ſome conſtitutions require much more than others.—It is one thing the moſt eſſentially neceſſary to life, as this is the time when the ſyſtem is freed from all incumbrances, undiſturbed by mental reflections, which often diſorder the animal economy, and prevent the human frame from acting, through all her departments, with equality, and full force, in which the nutritious particles, properly perfected by the operation of the conſtitution, are chiefly applied to

repair the waſte, and replace thoſe which have been abraded, and waſhed off by the labor and exerciſe of the day.

Thus ſituated, the moving and aſſimilating powers of the body have only that buſineſs by which the parts are renewed to perform, and the veſſels are properly diſpoſed to receive ſuch additions as are required, and co-operate to that end; but if the machine is too much indulged in this particular, it becomes much diſpoſed to be corpulent, languid, and weak, and feel a number of inconveniencies from thence ariſing.

With regard to the time neceſſary for the producing the good effects it is various in different conſtitutions: ſix or ſeven hours reſt is ſufficient for many adult conſtitutions, though ſome require nine or twelve.—A lady, whom I attended, of a relaxed and delicate habit, ſubject to hyſteric affections, and an acrimonious ſtate of humors, though by no means indolently diſpoſed, was adviſed to riſe early, and gradually leſſen the time ſhe uſed to devote to her bed, which was conſtantly twelve hours, and which was ſuppoſed to contribute much to the relaxation of her habit—ſhe made the attempt for ſome time, but could never enjoy ſo comfortable a ſtate of health, as when ſhe indulged herſelf in her uſual cuſtom.

Still in many this indulgence enervates the ſyſtem—renders them hypochondriacal and hyſterical—relaxes the ſolids—diſpoſes the humours to be viſcid, or acrimonious—blunts the vital powers—and brings on a diſeaſed, and early old age.

But,

But, notwithſtanding, we will allow that nature herſelf requires, in different conſtitutions, ſuch variability;—the cuſtom of ſleeping long, and indulging in bed, is very frequently the reſult of indolence, early induced, and long encouraged:—ſuch a diſgraceful waſte of time ſhould be diſcountenanced, and the habit conquered, which may always be accompliſhed, in the early and middle part of life, where it ariſes not from conſtitutional neceſſity, naturally implanted; but it muſt be done by ſlow degrees, for all extremes of change are detrimental.

It is the practice of numbers to indulge themſelves in ſleeping in the day-time; ſome immediately after dinner—ſtill, notwithſtanding what has been advanced by ſome authors, that ſleep is uſeful even at thoſe times, as it promotes digeſtion, I think the rule, very often, more ſalutary in the breach than the conformity; for it creates giddineſs and languor, eſpecially in thoſe addicted to ſtudy—deadens their thinking faculties, deſtroys perſpicuity, and clouds the imagination; but if no ſuch effects are perceived, and people find themſelves recruited, alert, and active, it may be allowed.

In proportion as the powers of digeſtion are more or leſs ſtrong in different ages, with reſpect to DIET, they have claimed different kinds.

To the younger claſs of ſubjects, and children, therefore, viands of the milder, and ſofter ſort, are conſidered as the moſt proper, as being more readily aſſimilated.

To grown perſons, thoſe which are more ſubſtantial and ſolid—and

For old people, it has been thought adviſeable to retrench of their ſolid, take that nouriſhment which is more fluid, and increaſe rather in drinking; becauſe they not only digeſt leſs freely, but the machine approaches more to dryneſs, from a deficiency in their juices.

Were the regulations here laid down obſerved with tolerable attention, and thoſe adverted to which have been ſpoken of, when treating of the Non-naturals, adapting them to the peculiar circumſtances of different conſtitutions, a plan may be formed by every individual ſufficient to contribute towards the continuance of health; nay, be fully adequate to inſure its preſervation, if cloſely purſued.

Theſe rules, though, are calculated for thoſe who are arrived at the years of maturity, or at ſuch a time of life, that they may become ſubject to the directions of others, who have made theſe things their ſtudy, and have from thence acquired a competent knowledge.

But before we conclude this part of our work, it ſeems proper to take notice of what is neceſſary to be done in the infantile ſtate, in order to promote for our offspring, in their tender years, the ſame benefits—and this leads us to conſider the good or evil conſequences of proper or injudicious Nurſing, which we ſhall make the ſubject of our next Section.

SECTION

SECTION VI.

On NURSING.

IF we look into and examine the bills of mortality, to be informed at what ages the greateſt number of people die, we ſhall find that half of them go off under the age of five years:—to what are we to attribute this? That nature is defective in her operations, and that half of mankind are born in ſo imperfect a ſtate, formed of materials ſo bad, or ſo defectively united, that they cannot ſupport the operations neceſſary for the continuance of their exiſtence any longer? Or are we to conclude that in that period they are ſubject to more fatal maladies, and die the victims of diſeaſe in greater proportion than at any other time? Were ſuch concluſions to be formed, we ſhould be accuſing the Omnipotence of Providence, or arraigning the principal Agent of Heaven, NATURE, of executing her office wantonly, or improvidently. This, then, cannot be the caſe; for if we look through the vegetable or mineral kingdom, we ſhall never find that any of their productions are ſubject to be deſtroyed, merely becauſe they are in a ſtate of primary exiſtence—or in the brute creation, becauſe they are young. When deſtruction happens to them, it is from being placed in ſuch ſituations, and under ſuch circumſtances, as are not congenial with their peculiar nature:—ſo happens it, I have no doubt, with the

human ſpecies, that this mortality in the infantile ſtate is owing to bad nurſing, where, by theſe means, the operations of the conſtitution are impeded, or perverted from the indolence, ignorance, or ſuperſtition of thoſe allotted to rear the infant in its tenderer years—and it is aſtoniſhing, that, in a buſineſs requiring the utmoſt ſimplicity for its ſucceſs, ſo many, and ſuch great errors ſhould be committed, as to become too certainly, and too commonly fatal, particularly in children born of delicate and weakly parents; who, partaking of their conſtitutions, are liable to be ſeverely afflicted from indiſcreet management, and want ſtrength to ſtruggle through calamities originating from that ſource.

Let us caſt our eye amongſt the hardy ſons of the ruſtic race—compare thoſe with the offspring of the more refined and poliſhed—what a difference in appearance! Amongſt the former, we find the children firm, robuſt, lively, healthful, active, and ſtrong; amongſt the latter, weak, puny, relaxed, and ſickly. Amongſt the former few die, but from the acceſſion of unavoidable illneſs, as meaſles, ſmall-pox, chincough, dentition, &c. Among the latter numberleſs expire from gripes, looſeneſſes, hectic fevers, worms, and convulſions.

But there are greater evils than diſſolution in this ſtate from this cauſe; for from hence diſeaſe itſelf is generated, and ſo fixed in the habit, that the life of many is oftentimes one continued ſcene of miſery;—nay, I have no doubt but, from this ſource, the temper and diſpoſition acquire ſo fretful a caſt, and oftentimes

times is ſo ſoured, and rendered ſo petulant and peeviſh, that, whilſt they do exiſt, they continue unhappy and miſerable in themſelves, as well as troubleſome and offenſive to their attendants and their aſſociates; for it has been allowed, that the faculties of the mind very often depend upon the organs of the body; for when theſe are in a tolerable perfect ſtate, ſo as to perform their ſeparate functions properly, the thinking part is more alert, active, and cheerful; and good-humour the conſequence of ſuch freedom—whilſt the contrary effects are produced, when the organs are diſturbed, or diſeaſed. To avoid, then, which diſagreeable effects, it is our buſineſs to lay down ſuch regulations as are founded on rational principles, ſupported by experience, and which conſiſt in bringing up children in a plain and ſimple manner, the mode moſt conſonant with nature; and if we obſerve the method ſhe invariably purſues, we ſhall find that ſhe delights in ſimplicity alone. View but the brute creation, and thoſe of the feathered race—ſee what occurs in them; examine what method they, in rearring their young, inſtinctively adopt, and mark their ſucceſs; cleanlineſs, proper feeding, and exerciſe, comprehend in theſe the infinite wiſdom of her laws—and if we add judicious cloathing, ſo ſhould they that of the human ſpecies.

As ſoon as quadrupeds bring forth their young, the firſt care of the mother is properly to clean them, and keep them perfectly warm, till all the moiſture is exhaled from the ſurface of the body; ſo happens it with birds: after which the young ſleep for ſome time—

almoſt

almoſt conſtantly for the firſt few days; in brutes, ſupported by the mother's milk alone, which is ready in the breaſt at an early period, the young ſoon walk, and become playful and ſportive, by which means they procure to themſelves ſufficient exerciſe, and in this manner are brought up with eaſe and certainty: with reſpect to cleanlineſs, the feathered race do the ſame, never leaving their young after they are hatched, till they are perfectly clean and dry; the mother, as ſoon as the egg is freed from the young, placing it under her in the warmeſt part; but as they are diveſted of milk, in order to nouriſh them, if of the granivorous kind, ſhe endeavours to render their nutriment the moſt eaſily digeſtible, and as nearly fluid as poſſible, by picking up grain, macerating for ſome time in her ſtomach, and then throwing it up into the mouths of her young, who, whilſt feeding, flutter their wings, and agitate their whole bodies in a ſurpriſing manner, which ſerves as a ſpecies of exerciſe, and this univerſally prevails in all ſuch as lay in the neſt ſome time before they can uſe exerciſe by flight, or running about, and feeding themſelves.

In raiſing up our young, we therefore cannot do better than imitate theſe laws, ſo univerſally prevalent, of which we ſhall take a general ſurvey;—which conſiſt in,

1. Cleanlineſs,
2. Cloathing,
3. Exerciſe,
4. Food,

under which all will be included neceſſary for the proper conduct of thoſe who make nurſing their particular buſineſs,

buſineſs, or undertake that office from neceſſity or inclination.—And firſt we muſt obſerve,

That numbers of children, as ſoon as they are born, are covered with a mucus, or white ſordes, which ought to be waſhed off with ſoap and water; but ſhould it be very adheſive, there is no neceſſity of rubbing the infant ſeverely at firſt, for on the ſecond dreſſing, if any remains, it will readily come off; and long continued or violent friction is apt to create uneaſineſs, ſubject the child to catch cold, and produce inflammation; and as cold, at this very early period, occaſions ſeveral diſagreeable conſequences, particularly ſore eyes—cough—ſtuffing at the breaſt—gripes—looſeneſs—or ſtoppage in the noſe, at the birth, it ſhould be wrapped up in a flannel receiver, lined with fine old linen, and kept from the contact of the cold air, for a quarter or half an hour, before it is cleaned, and this ſhould be performed before the fire; indeed, before the infant is taken from the mother, it will be prudent to cover the eyes by a ſoft linen bandage, and faſten it at the back part of the head. As ſoon as the child is cleaned, and well dried, the naval ſtring ſhould be carefully folded up in a piece of ſcorched rag, in two or three folds; for this not only prevents the infant from running the riſque of being griped by the coldneſs of the naval ſtring, but abſorbs the offenſive liquid which is generated by its running into a corrupt ſtate.

It is the cuſtom next for nurſes to rub the child's head extremely well with their hand after waſhing, and apply brandy or ſome ardent ſpirits at the ſame

time, and then forcibly preſs the head in different directions, under the notion of aiding in joining the bones, where the ſutures are open, a contrivance of nature, apparently that in labour the dimenſions of the head may be leſſened by the different bones riding one over the other, and delivery, by theſe means, be facilitated; after which the child's head is tight bound up with a forehead cloth.

This over officiouſneſs is highly detrimental and derogatory to the intent of nature; for by preſſing the head too forcibly, and keeping it in a confined ſtate, prevents the proper circulation of the blood through the veſſels of the brain, and brings on convulſions and other complaints from congeſtion; and all this without in the leaſt anſwering the intent for which this abſurd cuſtom is practiſed. For the bones join not by the edges of them coming in contact with each other, but from bony matter depoſited in the cartilaginous and membranous ſubſtance of the cranium, and forming a junction in this way, and therefore the head ſhould be left intirely to itſelf, after being well cleaned, without the labour has been very ſevere; then ſometimes the vertex will be greatly ſwelled by the long continuance of labour, occaſioning great preſſure upon the larger part of the head, and impeding the return of the fluids, by which the ſkin on the vertex of the cranium will be ſo loaded with fluids, as ſometimes to produce a tumor, not inferior in ſize to a large egg, which may inflame and ſuppurate, as I have obſerved, particularly where imprudently managed.

Inſtead,

Inſtead, therefore, of ſubmitting the head to ſo ſevere friction, let it be bathed, where ſwelled, with brandy—arquabuſade water—or ſome other ardent ſpirits; or rags, three or four doubles, may be dipped in Goulard's ſaturnine water, mixed with about a fourth or fifth part brandy, and applied to the part affected; and then the head ſhould be covered with a looſe flannel cap, over which may be placed a linen one, tied under the chin only juſt ſo tight as to keep it upon the head: and this operation may be repeated once a day till the ſwelling ſubſides, which will commonly be in the ſpace of two or three days.

Under the idea of giving ſtrength to the child's back, and enable it to ſupport itſelf, it uſed to be the practice, and ſtill continues in ſome country villages, to ſwathe or roll the child very tight round the abdomen, with a very broad roller; by which means the circulation of the blood was impeded, the ſuperior parts loaded, the periſtaltic motion of the inteſtines, and the action of the abdominal muſcles, hindered from properly performing their offices; hence gripes—convulſions—coughs—and general uneaſineſs. Inſtead, therefore, of this roller, a ſhort flannel petticoat, with a broad head ſhould be tied on round the waiſt, only ſo tight, as that a finger will eaſily paſs under it; ſo that if the child's belly ſwells, as it ſometimes will from flatulence, it may experience no uneaſineſs: and if after this a long linen gown is put on, the child will be ſufficiently dreſſed, be perfectly eaſy, and no obſtruction occur to prevent nature performing her proper operations. But there is another error frequently

quently committed with reſpect to what they think neceſſary to give the infant internally; therefore, as ſoon as it is dreſſed, they cram down its throat a large lump of butter and coarſe ſugar; or give it oil of ſweet almonds and ſyrup of violets: or ſhould the infant lick its lips, it muſt be fed with pig, that is, it muſt be permitted to ſuck the fat of that animal, in order to appeaſe, it is ſuppoſed, a ſenſation which ariſes from its mother's having longed for ſomething or another during her pregnancy.

Were there nothing but the mere folly and abſurdity to be conſidered as the reſult of this practice, it would not be neceſſary to ſay any thing to induce the forbearance; but theſe things are pernicious, inaſmuch as they mix with the meconium, or humor with which a child's bowels is naturally loaded, prevents its growing ſufficiently acrid to produce its purgative effect, or ſheath the bowels from feeling the effect, and thus produce many complaints which load, oppreſſion, and diſtenſion of the inteſtinal canal are apt to bring on: for nature ſeems to intend this meconium to clear, at an early ſtage, the firſt paſſages of the ſordes which have accumulated there. If, therefore, it is determined to give ſomething to the infant, a little caſtor oil, and ſimple ſyrup, will be the beſt, becauſe it anſwers the purpoſe intended by the meconium. For if we conſider the ſtate of the infant during labour—the effects of the meconium left to itſelf—the time before the mother acquires her milk, and that its property is at firſt aperient, we ſhall obviouſly ſee the reaſon, why nature preſerves this regularity

gularity in ſoliciting a diſcharge of fluids through the primæ viæ; and ſhew that if any thing is to be attempted, her plan ought to direct all our operations. For beſides clearing the ſtomach and bowels of its contents, which, by continuance there, might produce diſagreeable and dangerous effects, it ſeems intended to prevent the too free determination of blood towards the veſſels of the brain, which might be in a weakened ſtate from the ſeverity of labour: for the brain very often ſuffers great compreſſion from the bones of the head paſſing through the pelvis; indeed it is often ſo great, that the bones will wrap conſiderably one over the other, and conſequently the capacity of the cranium be much diminiſhed; by which means the blood will be prevented from paſſing into the exterior part of the brain, which is thrown into the head by the arteries appropriated for that purpoſe, conſequently the internal veſſels will receive a more than proper quantity, and by being too much diſtended, of courſe be weakened, and that in proportion to the continuance and violence of ſuch preſſure; in order, therefore, to prevent the miſchiefs which would ariſe from ſuch debility, if continued, and the ſucceeding accumulation, I conceive nature very wiſely conſtituted purging, that the veſſels may recover their due tone; and that this is one principal reaſon, I am induced to believe, from the firſt of the mother's milk always having a purgative property.

But however, I think that the leſs any ſort of theſe things are given the better. As ſoon, therefore, as the child is dreſſed, and the mother laid in a clean

and

and comfortable ſituation, the child ſhould be placed in bed by her, and both left to go to reſt, which they ſoon will do, and ſleep perhaps for ſix or ſeven hours, by which means they will be refreſhed, and recover in a great degree the fatigue they have both undergone: then the mother ſhould be fed with ſome thin broth, or weak wine gruel, and a little bread, or ſome ſuch ſimple materials; and the child, if the mother intends to nurſe it, ſet to the breaſt; notwithſtanding what ſome authors have ſaid to the contrary, under the idea, that as nature does not furniſh any quantity of milk in the breaſt, till the expiration of three days or thereabouts, it is uſeleſs, and only teazing to the mother and child, to have it ſet to before. This I am perfectly perſuaded though is erroneous, and often attended with diſagreeable conſequences, both to the mother and infant, diſpoſing the former to febrile affections, and bringing on a milk fever, from pain created by diſtention of the veſſels of the breaſt, and keeping the infant too long from that ſalutary food which nature has provided for it, and acts at firſt in a double capacity, as we have before ſpecified; beſides it ſupplies an opportunity for ignorant and over officious nurſes to cram the children with a variety of dabs, and too viſcid food; by which means a foundation is laid for a number of complaints, from loading and oppreſſing the alimentary canal, by ſuch things as are unconquerable by the digeſtive powers of the infantile ſtate; hence ariſe crudities—acidity—flatulence—and convulſions, which by a different management would be prevented. For by

ſetting

ſetting the child at an early period to the mother's breaſt, by the gentle ſtimulus on the nipple from ſucking the milk, is ſolicited in a gradual manner into the breaſt—the veſſels are made by degrees permeable—the infant receives it at firſt in ſmall quantities, adequate to its wants and digeſtive powers—no ſuperabundance of milk is collected, nor a ſudden flow of it into the lactiferous tubes, by which diſtenſion, pain, and febrile affections to the mother are prevented; the child's ſtomach is not overloaded, nor too great a quantity of fluid thrown into the habit, which would be injurious to ſeveral parts of the machine, particularly the head—lungs—and liver—as the circulation of the blood is now altered from what it was before the birth, and conſequently the veſſels in thoſe organs incapable to bear ſudden and too free diſtenſion; for the parts of the human machine are always better enabled to ſuffer changes brought on in a gradual and temperate mode, than by ſuch as operate in the contrary extreme: and this ſeems, in the caſe of which we are ſpeaking, to be the intent of unerring nature; it is ſo perfectly rational, that the deſcription alone carries along with it conviction. Indeed, I am ſo clearly convinced of the great utility and good conſequences ariſing from the adoption of this method, both from reaſon and experience, that I univerſally recommend it to thoſe who are capable and willing to ſuckle their own children; and in all healthful ſubjects, it is a practice which ſhould on no account be diſpenſed with; for to me, there is little doubt but that the milk of the mother is better adapted to the conſtitution

of her own offspring than of any other; beſides the advantages attending the firſt, as much ſo, I think, as the natural ſoil is to any indigenous vegetable: nor do I ſtand ſingle in this opinion; for many authors, who have written beſt on this ſubject, not only ſupport the ſame doctrine, but think that the mother's milk is ſufficient for the nouriſhment of the infant for the firſt twelve months, and recommend that, to that alone ſhould they adhere.

Could we inſure the health of the mother and child, I ſhould not heſitate to enforce the cuſtom; but as both are liable to fall into indiſpoſitions, which may either, on the one hand, render the milk improper, from its nutritious qualities being altered; or, on the other, from its increaſing ſome complaint in the primæ viæ. I think, during the child's being nouriſhed from the breaſt, it ſhould be fed once or twice a day with the boat; that if any accident ſhould render it abſolutely neceſſary to wean the child, or take it for a time from the breaſt, no inconvenience may ariſe from ſuch an alteration; for many children feed ſolely by the breaſt—take very ill to the boat: nay, ſome indeed are obliged to be ſupplied by the breaſt of a ſtranger, a circumſtance often painful, and almoſt always diſagreeable to the parents—and as a ſuccedaneum for the mother's milk that of aſſes is the beſt, or artificial aſſes milk with a little bread, called tops and bottoms; or roll, or biſcuit—not the common bread, for that has in its compoſition too much of alum, and may, in habits where there is a propenſity to coſtiveneſs, be particularly hurtful.

But,

But as children are apt to have moſt of their complaints originate from acidities in the ſtomach and bowels, or to have ſuch acidities very often as a diſtreſſing conſequence, it would be right to uſe them to the taſte of other viands; particularly weak veal broth, or that of mutton; or beef tea, if they ſhould have no diſpoſition to febrile affections;—but, whatever the food, care ſhould be taken never to overload the ſtomach, as is too commonly the cuſtom; ſo much ſo, that often, in the day, they may be obſerved reſtleſs, uneaſy, and ſick, and relieved alone by frequently puking —a happy remedy againſt the miſtaken humanity of over-fond mothers; for it is a common practice with them, and other nurſes, as ſoon, or as often as a child cries, or appears fretful, to appeaſe it by giving the breaſt, though it ſhould, a few minutes before, have ſucked to ſatiety. Inſtead of this, the child ſhould be amuſed by dandling gently, or by ſome other means diverted: exerciſe however is the beſt, in proportion to its age. In the firſt months, ſuch as is moderate, and of the gentler kind; afterwards, as its ſtrength increaſes, ſo may the exerciſe; for this quickens circulation, augments perſpiration, aſſiſts digeſtion, and helps to clear away viſceral obſtructions, and prevent coſtiveneſs. Indeed, in the early ſtage, it is uſeful, twice a day, when dreſſing and undreſſing the child, for the nurſe to rub it well with her hands, particularly on the extremities, down the back and abdomen, before the fire, for a quarter of an hour each morning and evening.—The infant will ſhew its approbation, and the utility, by kicking and

throwing about its legs, ſmiling, crowing, and by perceptible brightneſs in its eyes, and cheerfulneſs in its countenance. In ſome countries, particularly in ſome parts of Scotland, mothers very early adopt the cuſtom of dipping their children every morning into cold water; on which cuſtom Dr. Cullen makes the following obſervation: That he had ſeldom, or never ſeen the offspring of their women, ſo treated, ſubject to the rickets. It has long been recommended, and I think with ſome advantage, to waſh the legs, thighs, back, and head, with cold water. In this cuſtom there appear two very material advantages—cleanlineſs, and gently exerciſing the tone of the ſyſtem: by which the ſyſtem is unloaded, and ſtrength given to the muſcular fibres. And upon theſe two principles, regularly promoted, is it, perhaps, that we may attribute, in a great degree, the prevention of that complaint we have juſt alluded to—a complaint, the conſtant concomitant of naſtineſs, inordinate feeding, with improper food, and indolence.

Though this practice is very ſerviceable to healthful children, ſtill, in ſuch as are very delicate, and diſpoſed to inteſtinal complaints, ſome attention ought to be paid to the degree of cold uſed on this occaſion; and therefore, in theſe, it may be prudent to mix a portion of warm water with that which is cold, ſo that it may ſtill retain a proportionate degree of cold, compared with the natural warmth of the conſtitution, but of warmth compared with other common water; for we know that ſome will bear cold bathing, or waſhing, and receive abundant benefit, if the degree of cold

cold only be ſuch, that the internal part of the ſyſtem ſhall be capable of producing re-action adequate to the impulſe of the fluids occaſioned by the external application; if not, many diſagreeable conſequences occur, ariſing from a load being thrown upon the internal parts too ſuddenly, and too copiouſly, ſo as to overpower their action, ſuch as congeſtions in, obſtructions, and inflammations of the brain, lungs, viſcera, and ſome of the glandular parts, wherever they appear, from their debility, to be moſt prediſpoſed to ſuch affections.

In this method it may be neceſſary to perſiſt for three, four, or five months; but as children grow ſtronger, they then generally require thicker and ſtronger food, given them once or twice a day; cow's milk with roll, biſcuit. Tops and bottoms may be made uſe of, moderately ſweetened, or panada mixed with new milk, warm; and this food ſhould be made freſh twice a day in winter, and three times in ſummer: the new milk ſhould not be boiled, but mixed with hot panada, or pap; nor ſhould the viands be made ſweeter than that of mother's milk, nor given hotter than milk from the cow; for victuals too hot, or too ſweet, are apt to occaſion relaxation of the ſtomach and bowels, and create morbid acidity; and ſhould the child be of a coſtive habit, ſoft Liſbon ſugar, if laxative, ſuperfine ſugar ſhould be made uſe of: broths alſo ſhould make part of their food, minced chicken, or rabbit, with panada, and bread pudding, particularly after they are weaned; conſequently, a little before, it would be right to accuſtom them to

ſuch ſort of food. Potatoes is a food which numbers of children are fond of, and are very early accuſtomed to; however, to thoſe of delicate habit, I think them by no means proper, nor any other that are poſſeſſed of much viſcidity, inaſmuch as the accumulation of ſuch tenacious food in the ſtomach and inteſtines is apt to form a nidus for worms; but to thoſe of ſtrong digeſtive powers, born of healthful, athletic parents, ſuch as common ruſtics, this prohibition is leſs neceſſary; as it has been obſerved, in countries where this vegetable root frequently and commonly makes part, and a great ſhare of their diet, no ſuch inconvenience has been obſerved; but this depends not upon the ſalubrity of ſuch ſort of diet, but upon the firm ſtamina, and great ſtrength of the digeſtive powers of thoſe who feed on it—to the more delicate it is certainly injurious; and it is upon the ſtrength or debility of the conſtitutional powers by which we muſt in general regulate our conduct in our directions.—If children are born healthful, and ſtrong, ſuch regulations as are above laid down, will be ſufficient to conduct them forwards, with eaſe and ſafety, for the firſt twelve months, or longer; but ſhould they be born ſickly, as is ſometimes the caſe, it may be aſked, are the ſame rules to be obſerved? Under ſuch circumſtances, cleanlineſs, proper cloathing, gentle exerciſe, and the mother's milk, certainly form the beſt preventive and curative plan; for, by their proper adoption, I have no doubt but conſtitutions, weakly in their origin, may be ſtrengthened, and a number of complaints, the natural reſult of debility, not only cured,

cured, but often prevented. Though ſome caution may be neceſſary in feeding children naturally weak, great care ſhould be taken never to overload the ſtomach, notwithſtanding the food ſhould be confined to that afforded by the mother; it, therefore, would be adviſeable to give the breaſt to the child much oftner, ſo that a little milk only may be taken at a time, which will be eaſily and readily digeſted. This may be conſidered troubleſome to the mother, yet will ſhe be amply repaid, by ſeeing her offspring improve daily under ſuch judicious management, and meliorating a conſtitution, which otherwiſe would be made worſe, and fall a ſacrifice to painful diſeaſe; for, by overloading the ſtomach, that organ would be weakened, crudities and acidities be generated, green ſtools, looſeneſs, gripes, and convulſions be the unavoidable conſequences; for almoſt all complaints with which infants are at a very early period afflicted, except thoſe which ariſe hereditarily, from mal-conformation of ſome particular parts, infection, or contagion, deduce their origin from defect in the alimentary tube, and that generally acidity, occaſioned too often by indiſcreet and too copious feeding. But when ſuch acidities are too prevalent, they conſtitute diſeaſes, and will be taken notice of when we treat of ſuch as are incident to children; we ſhall only obſerve, if there appears a proneneſs in the habit to produce them, beſides the mode here directed for invigorating the conſtitution, it might be proper, now and then, to put a little magneſia into the victuals, if coſtive: if otherwiſe, ſome of the other prepared abſorbent earths, ſuch as

chalk, crabs eyes, or prepared hartſhorn; feed the infant once or twice a day upon broth, and uſe rice inſtead of bread, for it is leſs apt to turn ſour than any other of the lighter farinaceous ſubſtances.

But many authors have, reſpecting mothers ſuckling their children, laid it down as an indiſpenſable duty, and advanced, that almoſt all, of whatever nature their conſtitution may be, are capable of performing that office with the greateſt advantage to their own conſtitutions, as well as to their children; for, ſays Dr. Cadogan, "When a child ſucks its own mother, which, with a "very few exceptions, would be beſt for every child, "and every mother, nature has provided it with ſuch "wholeſome and ſuitable nouriſhment, ſuppoſing her "a temperate woman, that makes ſome uſe of her "limbs, it can hardly do amiſs. The mother would "likewiſe, in moſt hyſterical nervous caſes, eſtabliſh "her own health by it, though ſhe were weak and "ſickly before, as well as that of her offspring.— "For theſe reaſons I could wiſh, that every woman "that is able, whoſe fountains are not greatly diſturb-"ed, or tainted, would give ſuck to her child. I am "very ſure that forcing back the milk, which moſt "young women muſt have in great abundance, may "be of fatal conſequence: ſometimes it endangers "life, and often lays the foundation of many incura-"ble diſeaſes. The reaſons that are given for this "practice are very frivolous, and drawn from falſe "premiſes; that ſome women are too weak to bear

"ſuch

" ſuch a drain, which would rob them of their own
" nouriſhment.

" This is a very miſtaken notion; for the firſt ge-
" neral cauſe of moſt people's diſeaſes is, not want of
" nouriſhment, as is here imagined, but too great a
" fulneſs and redundancy of humours;—good at firſt,
" but being more than the body can employ, or con-
" ſume, they ſtagnate, degenerate, and the whole
" maſs becomes corrupt, and produces many diſ-
" eaſes."

However, notwithſtanding this authority, I am certain that there are many mothers totally incapable of giving ſuck, particularly ſuch as are of very delicate nervous conſtitutions, weak appetites, and poſſeſſed of bad digeſtive powers—whoſe fluids are acrimonious, and habits ſubject to hyſteric affections; for theſe, in general, neither afford milk ſufficient in quantity, nor properly elaborated for nutrition: hence, when they attempt to ſuckle their children, they do infinite miſchief to their own conſtitutions, by having it debilitated by the conſtant drain of what ſhould ſupport themſelves, and lay the foundation for a variety of complaints in their offspring, by pouring into it ſuch crude unwholeſome fluid. The children of ſuch women ſhould either be ſet to another woman's breaſt, or brought up by the boat. IF THE FORMER, there are ſome precautions requiſite to be obſerved, ſuch as we are directed to by the imitation of nature—as the infant is deprived of the mother's firſt milk, which is purgative, and clears the primæ viæ of their ſordes, art muſt ſupply the deficiency by gentle means: the

infant,

infant, then, ſhould have ſome aperient ingredient mixed with its food, as will prove purgative—the beſt of which is manna, and pulp of caſſia. Theſe may be given in ſuch quantities as will procure the child four ſtools every day for about eight or nine days; or a little caſtor oil, mixed with ſyrup, may be given it at proper intervals. Once a day, perhaps, may be ſufficient; or the nurſe may take ſome aperient electuary for the firſt week of ſuckling, which will ſometimes anſwer the purpoſe equally, in ſuch doſes only as may impregnate the milk with ſome of its aperient properties; after which, the ſame directions ſhould be purſued as have been before ſet down.

But with regard to the ſelection of a nurſe much is neceſſary. She ſhould be young, cleanly, active, healthful, free from any complaint, poſſeſſed of a good appetite, and quick, eaſy, digeſtive powers; and, above all things, her milk ſhould not be too old—the nearer the time to her having laid in the better, for the milk will then partake more of the nature of the mother's milk. I have ſaid ſhe ſhould be young—by that I mean between twenty and thirty, for, at this time of life, they are generally in the moſt healthy ſtate, moſt active, and more capable of contending with fatigue, and other unavoidable caſualties, without prejudicing their milk—which fluid it will be neceſſary to examine, for ſome women's milk is apt to be too thick, ſweet, and rich, whilſt others appear thin and watery—that is beſt which partakes neither too much of one or the other of theſe extremes.

Sometimes I have known parents very ſolicitous of dieting

dieting nurſes, in order to keep the milk in proper order, and this I have ſeen productive of bad effects. I would by no means take any nurſe from that mode of living by which ſhe enjoyed a good and perfect ſtate of health; for though we may tell what appears likely to produce general effects in the habit, if we form our judgement from experiments made on different materials out of the conſtitution, ſtill the peculiarities there exiſting, which can only be diſcovered by effects, make ſuch alterations, the cauſe of which we are unable to inveſtigate, and ſhould therefore be content with obſerving the conſequences. I ſhould, therefore, recommend that nurſes ſhould live in the common plain mode, of viands ſimple and nutricious, compoſed of animal and vegetable ſubſtances, avoiding all high-ſeaſoned diſhes, or ſalted proviſions; for theſe become difficult of digeſtion, create thirſt, induce febrile affections, and promote an acrimonious ſtate of fluids. I ſpecify this, becauſe nurſes, often taken into great families, are very deſirous of quitting their homely fare, and indulging in the luxuries of high life.

If the BOAT IS MADE CHOICE OF, a ſimilar mode ſhould be purſued with regard to clearing the primæ viæ, and the viands with which the child ſhould be fed, muſt be ſuch as moſt reſembles the mother's milk, fluid, not too ſweet, nor given too hot, and partaking, in ſome degree, of animal and vegetable nature—aſſes, or artificial aſs's milk, mixed with thin panada, made as above directed, or milk, warm from the cow: perhaps, in both caſes,

feeding

feeding children at ſtated periods, about four times a day will be ſufficient, if that cuſtom is begun very early.

So eſſentially neceſſary has exerciſe been conſidered towards the ſupport of health, that it has been adviſed by every author; but it ſhould be ſuch as is adapted to the age and conſtitution of the patient: in the firſt periods very gentle, afterwards increaſed, as the ſtrength of the infant increaſes, and that will be always the beſt, which, at the ſame time it gives motion to the body, appears to divert and entertain, for the ſpirits by theſe means are exhilirated, and the mind, from being amuſed, gives alſo quickneſs and ſtrength to nervous and vaſcular action—rubbing the child well before the fire twice a day we have ſpecified, gently ſwinging, or hoiſting for ſome time together, before ſome objects which engage its attention, cauſing the little infant to laugh, kick its legs, and exert its whole body by little ſprings, in the nurſe's arms, will be proper; for no child can continue long well that is ſuffered to ſit like a log in an indolent nurſe's arms; for ſuch a ſedentary poſition breeds crudities, occaſions the habit to be overloaded, blunts the activity of the veſſels, retards circulation, and breeds a variety of complaints from internal congeſtion:—nor ſhould nurſes be permitted to carry children always in one arm, a cuſtom too many acquire, but more particularly if the infant is inactive and weakly; for, from always reclining to one ſide, diſtortion is apt to take place: therefore, they ſhould conſtantly be removed from one to the other. It is highly uſeful to ſuffer little ones to roll upon

upon carpets, and be amuſed with ſome little toy or other, that may entice their exertions, to creep from place to place after it. This is pleaſant exerciſe, and early teaches an active uſe of their little limbs—and I have obſerved children, ſo brought up, more early get upon their legs, and run about, than others who have been uſed to leading-ſtrings, go-carts, and contrivances of theſe kinds; it is moſt adviſeable firſt to lead them off gently by the finger, and that may be attempted at a more early period than ſome adviſe—for the idea of ſetting children upon their legs very ſoon, occaſions them to be crooked, is not in fact true—ſo far from that, it gives them additional ſtrength; and it has been obſerved, that the legs of children which have at firſt appeared crooked, have, by early exertions to walk, become ſtronger, and perfectly ſtraight.

Beſides theſe things, children ſhould often be taken into the freſh air, and remain therein for ſome time, at leaſt twice a day, and always be kept perfectly clean, changing their cloths immediately upon being fouled; for ſuffering them to continue in a filthy ſtate, for any time, diſpoſes the parts to become tender and excoriated, creating pain, rendering children peeviſh, and inactive. They ſhould alſo be often waſhed with cold water behind the ears, as well as other parts of the body; for, from neglect in this particular, the moiſture, which naturally collects there, becomes acrimonious, irritates, and inflames the parts, and occaſions an acrid diſcharge, which brings on diſagreeable and painful excoriations. When it is from the neglect

of

of this cuſtom that this complaint ariſes, which we may conjecture to be the caſe, if the child appears healthful in every other reſpect, waſhing behind the ears with warm milk and water, or Goulard's water, or ſpreading a very fine rag, extremely thin, with ſaturnine ointment, and cleanlineſs, will generally promote the cure; but ſhould we have reaſon to ſuppoſe it a drain exerted by nature for the relief of internal indiſpoſition, other management ſeems neceſſary, which we ſhall ſpecify when we come to treat on infantile diſeaſes.

As we think that a vaſt deal depends upon proper Nurſing, in order to preſerve the human ſpecies, and prevent a variety of diſeaſes, which too often end fatally, or lay the foundation for various morbid affections, which are too apt to continue the painful concomitants of our future days, and embitter life through the whole of its progreſs, we have dwelt longer on this point than may to ſome appear neceſſary, but which we think cannot be too minutely obſerved; and it may not be uſeleſs to attempt to comprize the whole in a few ſhort axioms—and, firſt, we lay it down as an invariable rule,

That, immediately after the birth, children ſhould be wrapped in a warm wrapper, to preſerve them from cold; afterwards, in about half an hour, be well cleaned before the fire, looſely and lightly cloathed, not crammed with any dabs, but laid by the mother, and ſet to her breaſt as ſoon as poſſible.

That, where the conſtitution will permit, all mothers ſhould ſuckle their own children, at the ſame time

time not depend totally upon the breaſt, but occaſionally uſe them to the boat, or ſpoon, in order to be prepared againſt the effects of indiſpoſition, either in one or the other, ſhould they occur.

That cleanlineſs ſhould ever be invariably, and conſtantly obſerved—children never have their ſtomachs overloaded, but be fed fully only at proper intervals, five times a day; if not, oftener, and more ſparingly.

That all food, beſides the mother's milk, ſhould be of a nature as ſimilar as poſſible to that milk, compounded of vegetable and animal materials, as aſs's, or artificial aſs's milk, cow's milk mixed with thin panada, or rice uſed inſtead of bread, and weak broths occaſionally.

That they ſhould be conſtantly exerciſed, agreeable to their age and ſtrength, and ſuch uſed as ſeems to afford them pleaſure, and employs their attention; they alſo ſhould be much out in the air, and be attended by clean, young, lively, and active nurſes.

SECTION VII.

ON MEDICINE.

BEFORE we enter on that part of our plan, wherein we intend to deſcribe diſeaſes, and lay down their moſt approved modes of cure, it will be proper to ſay ſomething on the different nature of the remedies which will be recommended, in order to render the knowledge in their application more ſafe, eaſy, and certain;—as well as to explain the different general terms under which they are claſſed—as to theſe general terms we ſhall be unavoidably led very often to have recourſe.

But previous to the forming our arrangement, we think it neceſſary to ſpecify the different modes of action of various medicines taken from their known effects, as we find from experience they act in various ways—and we ſhall firſt obſerve—

That—active medicines produce their effects, by confining their action to the moving powers of the conſtitution, page 68, locally, or ſympathetically;—if we except water, conſidered as a diluent, or ſuch ſubſtances, where water abounds in a ſuperabundant quantity.

That no medicine acts upon the ſemina morbi, or particles, which form the origin of ſome diſeaſes;—except they lodge in the ſtomach, inteſtines, or ſome other cavities, where they come in contact in an unaltered

tered ſtate with the cauſe of the affection;—conſequently that there are very few, which can in any caſe be conſidered as ſpecific;—and then only in this way.

That—all medicines, cæteris paribus, poſſeſs their own peculiar, inherent power in an unaltered ſtate, and always exert ſimilar effects:—that when they appear to have any variability of action, it is owing to the conſtitution being different;—to the ſame conſtitution having ſuffered ſome change,—or ſome peculiarity;—or to ſomething they muſt meet with in the habit forming a new compound.

That—the ſtrong inherent power, or primary action of any medicine being known, its ſecondary or conſequent effects may be traced in general from the ſame ſource—and that when theſe are altered, it is owing to ſome conſtitutional cauſe laſt ſpecified, or to the difference of the doſe, varying its action only in degree.

That—ſome medicines, to which are attributed particular powers, have no ſuch powers inherent in themſelves; but are inactive, and have their action dependant on ſome other materials with which they meet, and form combination in the habit, making a new ſubſtance, different from the principles of which they are compoſed, and to which muſt be attributed their active powers.

That—ſome medicines, when thrown into the habit, have not the power always of exerting their primary action of themſelves alone, but when joined with other materials, produce the effect intended, conſiſtent with the power allowed inherent in them.

That—medicines do not always in ſimilar doſesproduce the ſame effects, on diſſimilar conſtitutions—nor, before the trial, can the active doſe be diſcovered;—therefore in the exhibition of all powerful medicines, this general rule ſhould be obſerved—*to begin with ſmall doſes, and gradually increaſe them, till the proper conſtitutional doſe is manifeſted*;—that is, till nauſea, ſickneſs, or ſome uneaſy ſenſation in the ſtomach is created, then by leſſening the doſe in a ſlight degree, the full one may be aſcertained—and this holds good in all active medicines—except ſuch where benefit is ſuppoſed to be derived from occaſioning nauſea, or ſickneſs—as occurs often in the adminiſtration of ſquills—ipecacoanha—and ſome antimonial preparations.

Now, as we find a number of theſe actions depend upon the ſtomach, and its intimate connexions with different parts of the human machine, we may ſay every part, that are poſſeſſed of moving powers, and influenced by them, it will not be improper to ſay ſomething relative to the effects produced by this intimate union.

With regard to the connexions—ſympathy—or conſent this viſcus has with moſt parts of the body, and the mind alſo, it is very cloſe, known from a variety of appearances obvious to our ſenſes; as well as the obſervation of the moſt judicious and ſagacious practitioners.—A very late writer, of no ſmall eminence, ſays—" Nothing affects the mind more than the ſtate " of the ſtomach, and nothing draws the ſtomach " into ſympathy more than affections of the mind.—

" This

" This is evident from hypochondriac people, whoſe " diſeaſe being chiefly ſeated there, has often grievous " effects upon the ſenſorium commune," that part where the ſenſes tranſmit their perceptions to the mind —" or the ſeat of it, the head—Does not, in theſe " caſes, the vomiting of bile proceed from conſent be- " tween the ſtomach and liver ?

" The ſtomach has a conſiderable connexion with " the viſcera of the thorax, or cavity of the cheſt— " abſtracted from its contiguity or diſtention.—In hy- " pochondriacal caſes, the heart and lungs are often " variouſly affected by the ſtomach—Convulſions of " the diaphragm are often occaſioned by ſlight irrita- " tions of the cardia, or upper orifice of the ſtomach ; " —many other ſymptoms might be adduced in proof " of the ſame thing, were it neceſſary."

" The ſtomach is connected with the abdominal " viſcera ;—and firſt, with the inteſtines ;—ſecondly, " with the other contiguous, as well as more diſtant " organs—as ſpleen—pancreas, or ſweetbread, kid- " neys, bladder, &c."

" This viſcus is connected with the extremities, as " has been experienced by the tranſition of the gout " from the ſtomach to the extremities, and vice verſa " —Cold and heat applied to the extremities affect " the ſtomach."

" It is connected with the whole ſurface of the " body, and ſeemingly with the extreme veſſels every " where.—This is demonſtrable by many obſervations " —for no ſooner do ſome aliments reach the ſtomach " of particular perſons, than ſpots and effloreſcences

" are occaſioned on the ſkin.—VAN SWIETEN " gave ſuch another inſtance from crabs eyes.—DR. " CULLEN had a patient labouring under the hy- " pochondriacal diſeaſe, who was relieved of his com- " plaint by pimples appearing between his thumb and " finger—and as immediately oppreſſed by their re- " tropulſion or diſappearing."

" Vomiting from conſtriction of the cutaneous pores " is another inſtance of ſuch ſympathy.—Such ſymp- " toms, therefore, are falſely attributed to acrimony— " and, upon the whole, we may conclude, *that the* " *ſtomach has a general conſent with the ſyſtem univer-* " *ſally.*"

If we conſider what has been ſaid on the action of medicines, deduced from experience, founded on their effects, and the ſympathetic power of the ſtomach derived from the univerſality of its connexions with contiguous, as well as diſtant parts of the machine, we ſhall be able to account for a number of phenomena which would, without ſuch knowledge, appear miraculous, and exceed all belief;—and alſo be enabled to arrange medicines under their reſpective heads, all which will be extremely uſeful in giving us the neceſſary information how, and in what caſes they ought to be applied.

For as nothing can be done effectually in the living machine without the action of the vital principle—and as we have no mode of regulating, or producing any effect upon that *primarily*, we are limited to direct all our operations on the parts of the conſtitution, that they may be put into ſuch ſtates, as to receive benefit from

from the ſalutary influence of that vital principle;—conſiſtent therefore with this idea we ſhall form our arrangement—which we ſhall here conciſely ſet down—leaving the full explanation of each particular, till we come to treat of them under their reſpective heads.

The arrangement conſiſts of five heads:

Firſt—MEDICINES which act upon the inert ſolids by means of the vital principle, under which will come

1. Nutrients
2. Aſtringents, and
3. Emollients.

Second—MEDICINES which act upon the living ſolids by means of the ſame principle.

Here will follow

1. Stimulants
2. Antiſpaſmodics
3. Sedatives
4. Errhines
5. Sialagogues
6. Expectorants
7. Emetics
8. Cathartics
9. Diuretics
10. Diaphoretics, and
11. Emenagogues.

Third—MEDICINES which act upon the fluids through the ſyſtem.

To this place belong

1. Attenuants
2. Inſpiſſant, and
3. Demulcents.

Fourth—MEDICINES which manifeſt their ſenſible action only in the primæ viæ, or firſt paſſages, from the throat to the anus.

Here ſucceed,

1. Antalkaline
2. Antacids, and
3. Antiſeptics.

Fifth—MEDICINES which produce their conſequences from external application, or on ſubſtances formed within the machine, and lodged without the verge of circulation—as

1. Epiſpaſtics
2. Blood-letting
3. Anthelmintics
4. Lithontriptics.

This then the arrangement, we ſhall now proceed to explain the different parts of which it conſiſts ſpecifically.

CHAP. I.

MEDICINES *which act upon the* INERT SOLIDS *by Means of the* VITAL PRINCIPLE.

§ 1. THE firſt of which are NUTRIENTS, from the Latin word *nutrio*, to nouriſh.—Theſe conſiſt of all ſuch materials as are calculated to be aſſimilated to our own ſpecific nature, by the action of the digeſtive powers;—and the application of which ſo aſſimilated, repairs the waſte which had been occaſioned by the different operations paſſing on in the human machine—Hence, from their affording nouriſhment, do they take their name.

But theſe vary in ſeveral reſpects, either as to their being more or leſs perfected in themſelves towards the

nature

nature of animal juices,—being of eaſier or more difficult digeſtion,—and alſo with reſpect to their fluidity or ſolidity.

But though they are poſſeſſed of ſuch various properties, they are all of them reducible to one ſtate, in order to promote ſupport to the animal; and the changes they undergo for this end are brought about by three different ways in the *firſt inſtance*—for *firſt*, the ſolid food is minutely divided, and has its texture in a great degree broken down by chewing, and farther reduced by the action of the ſtomach and inteſtines —this is called COMMINUTION — It alſo forms an union with the ſaliva, air, juices of the ſtomach and inteſtines—thoſe of the liver and ſweetbread—this is termed COMMIXTURE—and add to theſe the heat it receives, by which it is thrown into the third mode, or FERMENTATION — and all this it undergoes in the firſt paſſages.—*In the ſecond*, it experiences great diviſibility, union, and mixture, in paſſing through the lacteal veſſels, and by the force of the lungs;—and, *laſtly*, it is brought into its moſt perfect nutritive ſtate by the impreſſive influence of the circulatory ſyſtem upon their contained fluids. Hence we may conciſely ſay, that the aſſimilation of our food, for the purpoſe of nutrition, is performed by COMMINUTION—COMMIXTURE—and FERMENTATION.

And from this we may underſtand why all nutritious ſubſtances ſhould be adapted, both with regard to their quantity and quality, to the ſtrength and vigour of theſe powers collectively conſidered—and alſo are we taught what miſchiefs often ariſe from the indiſcreet in-

dulgence of fond mothers, and ridiculous nurſes, who load thoſe, who are weak in ſome or all of theſe particulars, too freely with food, conſidered in itſelf to be nutritious, in order that they may acquire ſtrength,—and by theſe means deſtroy the effect, by large quantities being poured into the habit, which ſmaller proportions of the ſame food would have indiſputably ſupplied;—for if the digeſtive powers are loaded with a ſuperabundant quantity more than they can conquer, they become, as it were, diſeaſed; and even the ſmall portion of food, to which their powers were adequate, left in a ſtate too imperfect for affording any nutrition. And this rule is extremely worthy of attention—for valetudinarians, however proper their food, ſhould never take more than they can bear with the greateſt eaſe. Indeed, in people recovering from very ſevere illneſs, where the active powers of the habit have been greatly enfeebled, though it is always right to throw in food of the moſt nutritious nature, the moſt eaſy of digeſtion, and ſuch as ſits the moſt light on the ſtomach, ſtill ſhould we begin with ſmall quantities, increaſing them, and altering the food in proportion as the patient recovers ſtrength; and this for very obvious reaſons, which will ſoon appear, as we examine the nature of our food more minutely than we have done in ſpeaking of the non-naturals.

Though we have before ſaid, that perhaps our firſt food partook moſt of a vegetable nature, yet as all ſubſtances are the more nutritious, the more they approach to that of animal, a diviſion ſeems here requiſite, in order to ſhew the different degrees they maintain

tain with reſpect to the nutriment they afford, and the proper modes of beſt acquiring and applying them to the conſtitution.

NUTRIENTS, therefore, may not improperly be arranged under three heads:

1. ANIMAL 2. VEGETABLE 3. MIXED.

Of the FIRST—All thoſe are the moſt powerfully, and moſt quickly nutritious, which have the leaſt acidity, and are moſt elaborated, or brought neareſt to the nature of animal fluids—hence the finer juices of the older animals become the moſt eligible, and theſe are beſt procured by ſlight boiling, or infuſing, in ſuch a diluted ſtate as the circumſtances may require; that is, in proportion to the ſtrength of the digeſtive powers:—for, as we conſider the very fine juices of animal ſubſtances the moſt nutritious, becauſe more readily aſſimilated to our own nature, for very weak debilitated habits, infuſion is the moſt advantageous proceſs, as by theſe means the ſubtler parts are preſerved, which by long or quick boiling would be diſſipated—but for thoſe poſſeſſed of ſtronger digeſtive powers, there is not ſo much neceſſity for this nicety.

Of theſe materials the moſt nutritious are, beef—and mutton-tea—as they are called—made in the following manner:

Take of the lean part of beef, or mutton, one pound, cut it into thin ſlices, and let the texture be well broken, by bruiſing it, then add to this one quart of boiling water, in an earthen or tin veſſel, keep it cloſe covered till it is quite cold—or boil them over a quick fire, for five minutes; ſeparate the ſcum, and decant

the

the clear liquor for uſe;—but ſhould we require more of the ſtronger parts of them, the liquor may boil ten, fifteen, or twenty minutes, and then proceed as before directed.

The juices of the older animals are preferable to thoſe of the younger, becauſe thoſe of the latter are more tenacious, and partake not ſo much of the nature of our own fluids, conſequently yield, in that reſpect, to the former.

But when it is requiſite that the fleſh of animals ſhould be given in its ſolid form—that of young ones is conſidered the moſt proper, as their fibres are much more tender, moſt eaſily broken down by chewing, and yield their nutritious part more readily to the acting powers of digeſtion.

MILK, of which we have before ſpoken, pages 112, 113, though of a mixed nature, between animal and vegetable, we conſider next; for it is a fluid only half perfected, and partakes, in ſome degree, of each of the other claſſes. We have, in another place, delivered our ſentiments on the allowed degrees of preference one ſpecies of milk has to another, and have ſhewn that of aſſes to be the beſt of any which could be procured, in proper quantity—we ſhall here, therefore, only obſerve, where that cannot be acquired, either from the greatneſs of the expence, or the ſcarcity of the animal, the following, called *artificial aſſes milk*, is not an inefficacious ſuccedaneum:

Take of candied eryngo root, one ounce; pearl barley, half an ounce; liquorice root, three drams; boil them in two pints of water till they are reduced to

one, then add one pint of milk freſh from the cow, boil them gently together, and ſtrain for uſe.—Half a pint of this ſhould be drank, in general, two or three times a day; but ſhould that quantity be too large, it may be reduced, and repeated oftener.

The VEGETABLE CLASS has been conſidered as more difficult of aſſimilation than either of the other, becauſe it is more diſtant in its nature from our fluids, and perhaps thoſe may be found the moſt nutritious that approach nearer to milk, that is, more impregnated with oil, not eſſential—ſaccharine ſubſtance—and a ſmall portion of vegetable acid; for it is from theſe qualities that all nutrition, in food of this ſort, is ſuppoſed to be derived.

We have ſpoken here, and in another place, of theſe things, merely as appropriated to afford nouriſhment only to the animal; but they muſt be allowed to have other properties, which it is neceſſary to ſpecify, as by theſe means different changes are produced in the conſtitution.

ANIMAL FOOD, particularly fiſh, is more ſtimulant and alcaleſcent, becauſe more prone to run into that ſtate, which generates pungent acrimonious ſalts, conſequently becomes more heating.

VEGETABLE, more diluent and aceſcent, from its being more replete with aqueous particles, and having ſtrong propenſities, from their very nature, to become acid—hence more cooling.

Milk, in this inſtance, partakes more of the latter, as it is ſubject, left to itſelf, to become acid; beſides vegetables are more emollient and ſheathing, as moſt of them

them abound not only with watery particles in great proportion, but alſo with thoſe which are mucilaginous; and ſeem to have inſpiſſating, or thickening powers, from their mixture with the fluids: hence, if we take into the account the quantity of fixed air with which they are replete, we may be convinced of their utility in caſes of the ſea or true ſcurvy, and in all thoſe morbid habits, where the fluids have acquired too great degrees of thinneſs, from inherent or accidental acrimony. Milk alſo retains the ſame properties.

Roaſted—broiled—or fried animal food, is more ſtimulant than boiled, and runs quicker into a ſtate of putreſcency—from the different culinary proceſſes they undergo; the firſt being prepared only by the action of ſtrong heat, by which means the fluids are rendered more pungent, and more highly alcaleſcent—the laſt receiving a leſs degree of heat, and through an aqueous medium, with which part of the animal juices are mixed, rendered more dilute, and leſs highly ſubtilized;—but when ſtewed down, to a great degree, and eat with the fluids in which it is prepared, it approaches nearer to the former, than when only infuſed, or gently ſimmered; nay, indeed, often exceeds them; and hence becomes alſo more difficult to be concocted or conquered by the digeſtive organs.

Of the vegetable claſs, we have ſaid farinaceous ſubſtances are the moſt nutritious, and thoſe which have undergone ſome culinary proceſs, becauſe their fibrous parts are rendered more tender: and thoſe which are moſt eaſily aſſimilated, which contain the moſt oil, ſaccharine ſubſtance, and a ſmall portion of vegetable

acid;

acid; conſequently thoſe which have ſuffered maceration and fermentation, as they become ſweeter, and have their viſcid parts rendered thinner, and more flexile, by thoſe means are more eaſily digeſtible:—But we muſt in this place make one obſervation, which affords an objection to what is here advanced.—There are another claſs of vegetables, which are ſuppoſed to be more nutritious—and theſe are the FUNGI, or thoſe fungous extuberances, called *Muſhrooms*, or *Champignons — Truffles — Morilles*, named by NERO, *the Victuals of the Gods*—they are conſidered to afford more nutriment, from yielding, on their chemical decompoſition, materials ſimilar to animal food. DR. CULLEN ſays, "if they are truly vegetable matters, "of which ſome have doubted, they are very different "from every other vegetable with which we are ac- "quainted—for in the firſt part of their diſtillation, "without addition, they give out no acid, but a large "proportion of volatile ſalt;—and expoſed to undergo "a ſpontaneous fermentation, they manifeſt no acef- "cency, but become immediately putrid—hence ſhew "they a very near reſemblance to animal ſubſtances; "and it may be preſumed, that they are more conſide- "rably nutritious than almoſt any truly vegetable "ſubſtances."

I have inſerted thus much relative to theſe fungi, in order that we may be acquainted with their particular uſes, not as correctors of animal food, like other vegetables, but rather as animal food itſelf, and correctors of acidity in the ſtomach—and on this account become a pleaſing delicacy to ſuch, who are forbid the uſe of all

all vegetables, on account of a prevalent redundancy of acid in the firſt paſſages.

All the acrid—bitter—or highly flavoured vegetables, as they conſiſt of parts which are not readily ſubdued by the digeſtive powers, but paſs in an unaltered ſtate in the courſe of circulation, come more properly under the claſs of medicinal ſubſtances.

Under this head of Nutrients we ſhall have no occaſion to ſupply a general catalogue, for all thoſe things fall under this claſs which we employ as food, and include whatever we eat and drink for the purpoſe of ſupporting the animal machine, and repairing its waſte.—And if we revert to what has been ſaid in treating on aliment, p. 94, and on thoſe liquids we in common drink, p. 109, with what we have here advanced, we ſhall be ſupplied with knowledge ſufficient properly to direct us in our ſelection; for I am fully perſuaded, that we oftener err by the quantity of food that we take, than the quality; as it is certain, ſuch is the power inherent in our habits, that though our food be in its own nature in many particulars diſſimilar, ſtill if we only ſupply ſuch quantities as are judiciouſly approportioned to our digeſtive powers, whatever the aliments on which we feed, they will all be reduced to the ſame ſtate, adapted to the preſervation and nouriſhing of the machine; we ſhall therefore advert to our next ſubject.

§ 2. ASTRINGENTS, from the Latin word *aſtringo*, to bind, or condenſe, which are all ſuch ſubſtances as by their action render the ſofter parts more compact,

compact, give a greater firmneſs to the ſolids, and a coheſive tenacity to the fluids. Their particular power in condenſing the ſolids is obvious from the effects which they produce in tanning, or making of leather.

Boerhaave was of opinion, that, when applied, they bring two diſtant parts of a moving fibre into cloſer contact, and into a more firm coheſion, and this by inſinuating between each particle of the fibre another of the ſame kind.

Dr. Cullen thinks, that as a fibre is compoſed of ſolid and fluid, the coheſion of the whole is increaſed by diminiſhing the watery, or by addition of the ſolid ſubſtance: but is rather a favourer of the firſt opinion.

With reſpect to the addition of any ſolid ſubſtance, it may be the caſe when acting on the inert ſolids, free from the influence of the vital, or nervous power; but in the living machine, we cannot ſuppoſe medicines of this claſs derive from this ſource their operation; for under thoſe circumſtances the medicine muſt be univerſally diffuſed, and come in contact immediately with the parts upon which it acts.

This, therefore, cannot be true—if we conſider the very ſmall portion of thoſe which ſhew their general aſtringent power, when taken upon the ſtomach, and the very quick mode in which they produce their effects; beſides, the variety of ſubſtances which manifeſt a conſtringent efficacy, when the machine is variouſly affected from different cauſes.

In proof of this we ſhall mention ſome few particulars:

ALUM,

ALUM, when given in doſes of a few grains, has been known to ſtop profuſe bleedings, ariſing from a relaxation of the ſolids, in a ſhort ſpace of time.

WHITE VITRIOL—BARK—STEEL—and ſome other of the ſtrongly acting medicines, have cauſed the ceſſation of other diſcharges, by invigorating the ſyſtem, and not from the locality of their application.

PUNGENT STIMULANTS have produced inſtantaneous effects, though not durable, in caſes of laxity.

SEDATIVES, or thoſe medicines which manifeſt their effects by alleviating pain, and abating the quickneſs of vaſcular action, have early ſhewn their power in the abatement of acrid defluxions.

Now it appears evidently that all theſe produce their influence by their action on the ſtomach ſympathetically conveyed to the machine in general, and to the parts particularly affected, which, as being in a more morbid ſtate, they experience more powerfully.

With regard to the fluids, thoſe medicines which have the power of ſheathing acrimonious particles, from whence diſcharges have proceeded, may be conſidered as aſtringents. In fine, whatever will promote a contraction of the ſolids, or coagulation of the fluids, come under this claſs.

But it muſt be obſerved, that many of theſe excite their action inſtantaneouſly, but do not give the ſyſtem the power of continuing the effect;—whilſt others act more ſlowly, ſtill occaſion, as it were, a permanency to that action in the conſtitution.

VOLATILE ſubſtances—eſſential oils, and others of this claſs promote very quickly the influence of the vital powers, by which means the conſtitution very early is made ſenſible of their power; but as ſoon as they ceaſe to act, which they do in a ſhort ſpace, the morbid effects, they ſeem to have conquered, are reproduced.—Alum alſo labours under the ſame diſadvantages.

But the more ſlowly acting aſtringents continue their force longer, and appear to give a ſtronger and more laſting coheſive power to the particles of the ſolid fibres, as if they increaſed their attractive influence *inter ſe*.

From this knowledge we ſhall be able to deduce a mode of preſcribing, of infinite uſe in practice, which would at an earlier period have been conſidered as contradictory, and ridiculous, becauſe deviating from the commonly received opinion—for, from what has been advanced, we ſee that volatiles and aſtringents may be judiciouſly united, and will be the means of aſſiſting the effects of each other, by producing them ſooner, and making them more laſting—as I have often found in the courſe of practice, particularly where the conſtitution has been defective in vaſcular irritability, and nervous incitability; for, by adding volatiles and pungent ſtimulants to bark, in many caſes, the wiſhed-for effects have been produced, which could not be attained by bark alone.

To theſe, where the humours are acrimonious, ſheathing medicines, called demulcents, may be joined;—and ſedatives occaſionally had recourſe to, where ſpaſms attend relaxation of the ſolids.

But we muſt here obſerve, that where the aſtringent ſaline minerals, ſuch as thoſe of ſteel—white, and blue vitriol—the preparations of lead—alum, &c. may be thought proper, volatiles muſt not be joined with them, as they will occaſion a decompoſition, and render the aſtringent power of the compound mineral leſs active, nay, perhaps, deſtroy it altogether.

The catalogue, preſented to us by various authors, is extremely copious, but we ſhall content ourſelves with a few, which are in general allowed to be the moſt efficacious.

ASTRINGENTS *from the Mineral Kingdom.*

IRON, filings, or ruſt prepared—doſe from 5 grains to 30.
Ammoniacal iron, 3 grains to 15 or 20.
Tartarized iron, 10 grains to 30.
Vitriolated iron, 3 grains to 20.
Tincture of muriated iron, 10 drops to 60.

ALUM, burnt, from 2 to 15 grains.
Whey, from 2 to 4 ounces.
Curd, externally.

CHALYBEATE WATERS—
Tunbridge Hampſtead
Pyrmont Iſlington, &c.

ZINC—Calcined zinc, 2 grains to 6.
White vitriol, ½ a grain to 2.

COPPER—Blue, or Roman vitriol, ¼ of a grain to 2.

LEAD—Water of acetated litharge, } from 1 to 3 drops.
Acetated ceruſs, ½ a grain to 1 and 2.

From

From the Vegetable Kingdom.

ROSES—Conſerve, 1 or 2 drams to ½ an ounce.
Infuſion, 2 ounces, or more.

TORMENTIL ROOT—
In powder, 8 grains to 40.
In decoction, 2 to 3 drams.

KINO—powder, ½ a ſcruple to 2 ſcruples.

MADDER—powder, 20 to 30 grains.
In decoction, 1 ounce in 3 pints boiled to 2—doſe, 2 ounces.

WOOD SORREL—Conſerve.

WATER-DOCK ROOT—
In decoction, ½ a pound to 6 pounds of water reduced to 4—doſe 8 ounces.

CUP MOSS—In decoction, ſaid to cure the chincough.

QUINCES—Marmelade.

MULBERRIES—Syrup.

MEDLARS—Fruit, not to be eaten before long keeping.

SLOES—Conſerve, doſe 1 or 2 drams.

NETTLE, ſtinging—
Juice, or decoction, 2 to 4 ounces.

BEARS WORTLE BERRY, the leaf—
Powder, 15 to 30 grains.
Decoction or infuſion, 1 or 2 drams in a pint and ½ of water reduced to one pint—doſe from 6 to 8 ounces.

TINCTURE OF CATECHU, which was called JAPAN EARTH, 1, 2, or 3 drams.

POMEGRANATE—

In decoction { An ounce to a quart of milk and water reduced to a pint.

OAK and ASH BARK—

Slight decoction, gradually increaſed.

SIMAROUBA, or GUIANA BARK—

Powder, from 10 to 20 grains.

LOGWOOD—Extract, 10 to 40 grains.

Decoction, { ½ an ounce to a pint and ½ reduced to 1 pint.—Doſe, 3 ounces.

GALLS—externally, { 1 part of powder to eight of hog's-lard.

All the Acids, vegetable as well as mineral—all the bitter Stimulants—Sedatives—and all the ſtimulant Balſams. We ſhall not ſupply any formula here, from the different combination of theſe articles, but ſpecify them more particularly, when we come to treat of thoſe caſes where ſuch applications are required.

Though we have ſet down the doſes according to what is generally held proper for adults, expecting they will be varied according to the age and conſtitution of the patient, and the exigence of the caſe to which they are neceſſary, one obſervation it is proper to ſubmit here, for the information of the reader; which will apply in all the other departments on the ſubject of medicine, as well as in this place.

That, as the ſame doſe of any active medicine will not be adequate to produce the intended effect *on all conſtitutions*, the doſe ſpecified being too large for ſome, and for others too ſmall—we ſhould always begin with a very

a very moderate doſe at firſt, and increaſe it gradually, till the full proportion can be diſcovered; thence we ſhall be certain of deriving every advantage which the medicines can procure. Beſides, we ſhall avoid producing too violent effects upon thoſe habits which have a natural antipathy to any particular medicine, which can only be diſcovered from experience.

§ 3. EMOLLIENTS—ſo denominated from the Latin word *emolleſco*, to grow ſoft or ſupple.

Theſe act in a mode oppoſite to the preceding claſs, inaſmuch as aſtringents give firmneſs to, theſe induce a relaxation in the ſolids.

They have been called RELAXANTS, and may be conſidered as ſuch, if we include their mode of action in a double ſenſe; for though they have been thought to produce ſuch a change in the ſolids as occaſioned them to be extended, more than they were before, without rupture; ſtill they have been acknowledged to reduce a part of the body, indurated and compacted in one uniform bulk, into its ſtate of contained liquid, and containing ſolid.

It has been conjectured, that emollients act chiefly upon the ſolids, by introducing their particles, which conſiſt moſtly of the watery, mucilaginous, and oleaginous kind, between thoſe which compoſe the ſolid fibre, thus forcing them farther from their ſphere of attraction, and bringing them nearer to a ſtate of fluidity; for ſolids and fluids differ but in proportion to the ſtronger or weaker attractive power of their component parts.

But notwithſtanding this may be the caſe in many, nay, perhaps, moſt inſtances, ſtill they may produce their effects generally over the ſyſtem by their action on the ſtomach; for if that organ is relaxed, ſo will all the other parts, dependent upon it, without having any watery particles introduced to weaken their texture.

FEAR and GRIEF are powerful relaxants, but theſe may be ſaid to affect the mind and vital power, and hence produce their effects.

INEBRIATION has with numbers the ſame conſequence, but this ariſes from the relaxed ſtate of the ſtomach, which is ſoon taken off by ſtimulating that organ, as has before been ſpecified in the beginning of this work.

Women in general experience ſimilar miſchiefs, from repeatedly drinking *hot tea*, and other liquids under the ſame circumſtances.

EMETICS given only in ſmall nauſeating doſes, enervate, and relax the ſyſtem from the ſame cauſe.

SEDATIVES (chap. 2. § 3.) may alſo be conſidered in ſome degree under this head.

Thoſe, however, which produce their effect upon the machine in general by ſympathetic power, will be conſidered under different heads. Under emollients we mean to rank only ſuch ſubſtances as act from their watery, mucilaginous, and oily particles, of which they conſiſt; and theſe prove moſt effectual on the parts to which they are more immediately applied, which DR. CULLEN conceives to act in one of theſe two ways; "the one by being inſinuated into the ſubſtance of the

"ſolid,

" ſolid, and thereby diminiſhing the denſity of the " whole of the mixt, they diminiſh its force of cohe- " ſion. The other is, when, by being inſinuated into " the interſtices of, or ſpaces between dry particles, " they diminiſh the friction which might otherwiſe oc- " cur, and thereby render the whole more flexible. " The former ſeems to be the operation of water, the " latter of mucilage and oil."

And theſe three ſeem to include all the emollients, if we were to examine the articles, multifarious as they are, which conſtitute this claſs. Indeed, for internal uſe, the writer above ſpecified rejects the whole, and gives the preference to the infuſion or decoction of linſeed; which is fully as efficacious as any other.

And here, though we muſt obſerve, that, as in many febrile complaints the uſe of emollients ſeem abſolutely neceſſary, where the degree of febrile affection runs very high, we are rather to adhere to thoſe of the watery, mucilaginous, and farinaceous kind of the vegetable claſs, than to thoſe abounding with oil, or animal ſubſtances; becauſe, from heat, they are apt to grow rancid, acquire acrimony, and hence become too ſtimulant, and much increaſe the febrile effects we wiſh to reſtrain.

The catalogue of EMOLLIENTS furniſhes us with a great variety of ſubſtances, out of which we form the following ſelection—which, as they are ſo very ſimple in their own nature, and produce no powerful action in the habit when taken internally, require not to have any particular doſes annexed to them.

EMOLLIENTS *from the Animal Kingdom.*

Weak broths—crude yolks of eggs—honey—milk—cream—butter—ſuet—fat—ſpermaceti.

From the Vegetable Kingdom.

The ſeed of quinces—line—fænugreek—white poppy—wheat, rye, oats, barley, particularly the farina of theſe — figs — raiſins — dates — marſh-mallows—balm.—Decoctions or infuſions of theſe are pleaſant and efficacious for common drink.

Oil of almonds—olive oil.—All bland expreſſed oils.

Bete—ſpinage—white lily root—boiled onions.—Liniments, ointments, fomentations, or cataplaſms formed of theſe ſubſtances, which we ſhall, in their particular places, hereafter ſpecify, have ſimilar effects—perhaps the warmth with which they are applied may have ſome gently ſtimulating powers, and hence prove alſo in ſome degree efficacious in thoſe complaints for which they are adviſed.

To theſe we ſhould have added the warm *vapor of of an animal recently killed*—for we have inſtances of the arm, and other parts, put naked into the body of an animal immediately after it has been ſlaughtered, receiving great benefit, in caſes where relaxing applications ſeemed requiſite; and where many of the others had been tried without any advantage.

But the moſt emollient of all is VAPOR, either received by the mouth, or injected by glyſter, moderately warm—and indeed it is almoſt univerſally eſteemed ſo, whether applied internally or externally.

Theſe

Theſe form the claſs, it has been ſaid, of medicines which act upon the inert ſolids by means of the vital principle. That aſtringents and emollients may act upon the inert ſolids alſo, perhaps, without the aid of that principle, in many caſes, when brought into contact with them, may be allowed—but that in the living machine they do, is much to be diſputed—and that the nutrients cannot, is evidently clear; for if that principle is defective by which the nutritious matter is applied to particular parts for their ſupport and reparation, the matter itſelf will avail but little. This ſeems clear from our obſervations on paralytic limbs, receiving ſuch ſlight degrees of ſupport, and of being ſcarce at all benefited by the application of aſtringents or emollients, where ſuch deficiency takes place. However, in a work of this nature it ſeems not neceſſary to go too minutely into a ſubject of ſo much intricacy; it is enough for our purpoſe to point out effects produced by the particular materials ſpecified, without being very ſolicitous of inveſtigating the preciſe mode by which they are accompliſhed.

Our ſecond poſition leads us to treat

CHAP.

CHAP. II.

On MEDICINES *which act upon the* LIVING SOLIDS *by Means of the* SAME PRINCIPLE.

THE firſt of which are,

§ 1. STIMULANTS, ſo called from the Latin word *ſtimulo*, to prick or goad:—and theſe are all ſuch medicines as increaſe the oſcillatory or vibrating motion of a fibre, or excite the action of the moving fibres in the living animal.

How ſtimulus increaſes action we cannot point out the preciſe mode; but this we know, that all thoſe things which can increaſe the influence of the vital powers, either diffuſively, or partially, are real ſtimulants, and as ſuch muſt be conſidered.

They have been concluded to be of two kinds—DIRECT and INDIRECT. The *firſt* are imagined to act directly on the moving fibres;—the *ſecond* on the organs of ſenſe, by which means a perception is excited on the common ſenſorium, which acting there, determines the nervous power to flow more copiouſly into the whole, or particular parts of the ſyſtem. Theſe are the moſt common and univerſal. But ſtimulants do excite motion in the moving fibres themſelves independent of any connexion with the common ſenſorium; for if the heart, or ſome other of the muſcular parts, are ſeparated from the body, they may have their action excited by the application of particular ſtimuli: this then is a certain proof of an irritable power inherent

rent in themſelves independent of connexion with any nervous power. *And again*, it is as clear, that a ſtimulus applied to the ſtomach will diffuſe its power to the whole habit; or if to a part, other parts far diſtant will experience its influence, as in caſes of general heat being occaſioned by the uſe of cordials or volatile ſubſtances—vomiting from irritation of the kidneys, &c. Hence then we may fairly conclude, that action is produced by ſympathy, as well as local ſtimulus.

Beſides, in many of theſe actions, mental power is the firſt cauſe, as we may diſcover in longings, deſire for that food of which we ſee others eating with uncommon reliſh; by which means the ſtomach is ſtimulated, and a ſtrong ſenſation of hunger is induced, which did not before exiſt—weeping alſo from ſorrow, —vomiting and ſickneſs from recollection and reflection, &c. Theſe are inconteſtable proofs of the truth of our aſſertions.

Hence, then, ſtimulants may be properly divided into three claſes:

GENERAL—and theſe are ſuch materials as are taken into the ſtomach, and communicate general affection through the ſyſtem, owing to the connexion of that organ with every other part of the machine.

LOCAL—where irritation is produced on the part affected.

MENTAL—where, without the application of any material ſubſtances, applied to the ſtomach, or any other part, ſimilar affections will be produced by the powers of the mind.

Indeed,

Indeed, almoſt all active medicines might be ranked under the head of ſtimulants, were we to claſs them according to their known operations; ſubmitted to different diviſions under this general term, agreeable to the effects they produce—but we ſhall confine ourſelves to ſuch ſubſtances as invigorate the ſyſtem, increaſe the action of the nervous and vaſcular power locally or univerſally.

And from hence ſhall we ſee their uſe, by facilitating the paſſage of the blood through the parts in which it moved too ſlow, or was morbidly obſtructed by augmenting the force and celerity of the circulation—they quicken the ſenſes where morbidly affected, rouſe the mental faculties when in a lethargic ſtate, and exhilirate a deſponding condition.

They reſtore the powers of motion where morbidly defective, and alſo the ſtrength of motion where morbidly weak.

From their uſes have they been divided by ſome authors into ſuch as are diffuſible—cordial—and topical by their action—that is, ſuch as have their action conveyed over the ſyſtem—ſuch as exhilirate the ſpirits—and ſuch as are applied to ſome particular parts morbidly affected. Examples of the FIRST have we in

Volatile alkaline ſalts, Electricity, Heat.

Of the SECOND in

Cinnamon, Nutmeg, Wine.

Of the THIRD in

Muſtard, Cantharides, Preparations of mercury.

Theſe

Theſe we have ſpecified for the eaſe of ſelecting the particular ſubſtances, according to their uſes, from the following catalogue of

STIMULANTS—moſt of which, when taken internally, have a power of increaſing the force of circulation, and invigorating the ſyſtem—and ſome proving alſo more immediately cordial, by revivifying the ſpirits.

Of the FIRST CLASS are

Horſe-radiſh
Muſtard
Garlic
Onion
Leek
Turpentine
Balſams of Copaiba, Gilead, Peru
Gum Guaiacum
Myrrh
Guaiacum wood
Saſſafras
Contrayerva
Snake-root
Caſcarilla
Wake Robin
Volatile ſalts.

Of the SECOND,

Lavender
Roſemary
Pennyroyal
Pepper-mint
Aniſeed
Carraway
Cardamom ſeed
Cinnamon
Caſſia wood
Mace
Nutmeg
Cloves
Pimento
Pepper
Ginger
Capſicum
Grains of paradiſe
Wine
Eſſential oils

Thoſe

Thoſe uſed topically are

Muſtard
Horſe-radiſh
Cow-itch
Cantharides
Euphorbium
Preparations of mercury
Volatile alkaline ſalts
And theſe made either into plaiſters, epithems, cataplaſms, ointments, or liniments.

The following, though truly conſidered as poſſeſſing a greater or leſs degree of ſtimulating power, produce not the effects before ſpecified ſo ſenſibly:

Zedoary
Genſing
Caſcarilla
Common and Roman wormwood
Chamomile
Orange and Lemon peel
Quaſſia wood
Hops
Dandelion
Millipedes
Hyſſop
Ground-ivy
Hedge-hyſſop.

All the NUTRIENTS and ASTRINGENTS are of this claſs; and many others of the ſucceeding claſſes, though ſtimulant, are more particularly appropriated to other purpoſes, under which heads they will be arranged. The catalogue here given will be ſufficient to anſwer the purpoſes to which ſtimulants, merely conſidered as ſuch, are calculated to be of any uſe.

But as ſome of them have been thought, by very reſpectable authority, to poſſeſs ſome peculiar powers, and are eaſily attainable, we ſhall beg leave to ſpecify them.

HYSSOP

HYSSOP has been reputed to be attenuant, reſolvent, pectoral, in coughs and aſthmas occaſioned by viſcid phlegm; thought to produce expectoration, drank in form of tea, and ſweetened with honey; and to have the power of promoting the menſes attributed to it.

GROUND-IVY, drank in the ſame form, or in decoction, has been eſteemed corroborant, aperient, and detergent, uſed alſo in coughs and aſthmas, to attenuate viſcid phlegm and mucus, and to brace and ſtrengthen the veſſels of the lungs; formerly much ordered in conſumptive caſes, and ulcers of the kidneys, as an efficacious remedy.

PENNYROYAL. This has been conſidered cordial—of great uſe in hyſteric caſes—to increaſe the tone of the ſyſtem—and the chief vehicle for other medicines, to which were attributed the power of promoting the monthly diſcharges of the female ſex. Indeed, in this laſt caſe, by ſome practitioners, it is held in no little eſtimation.

SPEAR-MINT. To this has been aſſigned cordial virtues, and a powerful reſtrainer of vomiting—tea made of this herb often anſwering this purpoſe, where every other effort has failed. It is recommended in flatulent caſes, fluxes, worm caſes, and many other diſorders; and, though conſidered as a ſtimulant, it is not heating, a peculiar advantage it poſſeſſes over many other of the cordial claſs. Pepper-mint ſeems alſo to poſſeſs the ſame power.

HEDGE-HYSSOP. This is named a hydragogue, or an evacuator of watery humours from the body—

hence

hence uſeful in dropſical caſes, and alſo worms, from its purgative power. In ſubſtance it is ſaid to promote vomiting, ſweat, and urine, to be of ſervice in maniacal and venereal caſes, after mercury had been given freely without effect—the doſe, in powder, from 10 to 30 grains.

DANDELION. This has been conſidered as peculiarly uſeful in viſceral obſtructions, particularly thoſe of the liver, as it ſeems calculated from its ſtimulant, deobſtruent powers, to promote bilious diſcharges —and, from experience, has been concluded highly efficacious in all biliary infarctions of the liver.

WAKE ROBIN. Much has been ſaid by men of the firſt medical authority in favour of this medicine, and uſed to be recommended as promoting watery excretions, quickening circulation in cold phlegmatic habits, and in diſeaſes from viſcid phlegm.

In deep ſeated, fixed rheumatic pains, it has been given with ſucceſs, in doſes of from ten grains to a ſcruple of the freſh root two or three times a day.

GEOFFROY and BERGIUS ſpeak highly of its powers, as reſtoring loſt appetite, curing intermittents. In the jaundice, green-ſickneſs, hyſterical, hypochondriacal, and other diſeaſes, it has been found uſeful. In caſes alſo of obſtinate head-achs, which return at intervals, without fever, mixed with alkaline aromatics and abſorbents. It is given in the following manner:

Take powder of wake robin, vitriolated tartar, of each ten grains; powdered rhubarb, five grains. If theſe purge too violently, the quantity of the arum may be leſſened.

GEOF-

GEOFFROY uſed to give it in doſes of from half a dram to a dram; and by being boiled in vinegar, he ſays it becomes powerfully diuretic.

LEWIS gives from ten grains to a ſcruple of the freſh root twice or thrice a day, made into a bolus, or emulſion with oily, or mucilaginous ſubſtances—it generally produced, whilſt the patient was warm in bed, a copious ſweat. It is now kept in the ſhops made into a conſerve, half a dram of which may be given as a doſe, and gradually increaſed.

Thus much has it been thought neceſſary to ſay of ſtimulants, in order to furniſh a general idea of their extenſive utility, under proper management; but as their uſes are ſo multifarious, and almoſt the whole catalogue become repeatedly under our conſideration in the ſucceeding part of this work, wherein we ſhall be more particular in the ſpecification of their doſes, and the peculiar caſes to which they are applicable, we ſhall quit this part of our ſubject, and proceed to our next head.

§ 2. ANTISPASMODICS, derived from *anti-ſpaſmata*, medicines which take off ſpaſms, or what are commonly ſtiled convulſive affections of the human machine.

Though there certainly appears a difference between ſpaſm and convulſion, as they never run one into the other; yet there have been many diſputes relative to the definition, ſo that their diſtinctions may be properly marked.

Some have ſaid, if the ſolids are drawn into involuntary contractions, and they do not continue long,

but go off, and frequently return again, theſe affections are termed *convulſions*—but if they remain a conſiderable time, *ſpaſms*.

GAUBIUS defines a ſpaſm, a violent, involuntary, inordinate action of the moving fibres; and ſays, they, who diſtinguiſh a ſpaſm from convulſion, call the firſt a continued, the latter an alternate contraction of the muſcles.

They have been diſtinguiſhed by the terms tonic and clonic, from the Greek words *teino*, to ſtretch or fix, and *kloineo*, to ſhake. Hence, by the former are to be underſtood, ſuch ſpaſms as are continued; by the latter, ſuch as are tremulous;—or, in other words, by SPASM we ſhould underſtand thoſe muſcular contractions, which, once excited, remain in that ſtate of contractility for ſome length of time—by convulſion, ſuch as are irregular, and have relaxations and contractions alternating quickly with each other.

Though this diſtinction is neceſſary to be known, for the better underſtanding the authors who have written ſyſtematically on the ſubject; yet ſtill it will be of little uſe in a practical view; as we ſhall find, according to the cauſe, what will be uſeful in one ſpecies, will alſo in the other. Indeed, there are ſuch a variety of cauſes, ſo very different in their own nature, which may produce ſpaſmodic or convulſive affections, that there will neceſſarily appear to be a great diverſity of medicines which ought to be ranked under this head.

SPASMS ariſing from laxity, are removed by *aſtringents*; from an over diſtenſion, by *emollients*; from acrimony, by *demulcents*, or ſuch medicines as ſheath the offending

offending particles; from acidity in the firſt paſſages, by *abſorbent*, or *alcaleſcent ſubſtances*, which, by uniting with the acid, form a third ſubſtance, inoffenſive in its action, and thus remove the cauſe; from wind, by thoſe materials which diſperſe wind by their ſtimulating powers, and are called *carminatives*; from worms, by thoſe ſtiled *antbelmintics*, or deſtroyers or evacuators of them, &c.—but theſe are conſidered, in regard to their known action, under their reſpective heads, calculated to operate againſt, and remove the acting cauſe.

But what we underſtand in this place by antiſpaſmodics, are ſuch medicines as are ſerviceable, from their influence on the nervous energy, or increaſed nervous power, by removing ſpaſmodic contractions taking place in different muſcles; and by allaying convulſive agitations, where the cauſe is too latent to be diſcovered preciſely; or, if conjectured at, too obſtinate to be removed by medicinal applications with any degree of certainty; ſo that the conſtitution being relieved from the violence of theſe effects, nature may be left more at liberty to exerciſe her power for the extirpation of the operating morbid cauſe.

And in our adminiſtration we muſt obſerve, where the conſtitution appears to have an inflammatory diſpoſition, we muſt ſelect ſuch as are the leaſt ſtimulant; where relaxation or debility ſeems prevalent, thoſe which are more powerful.

Beſides, as the claſs of antiſpaſmodics conſiſt of medicines diametrically oppoſite in ſome of their ſenſible

properties—ſome being highly fœtid—others as greatly odoriferous—and are conſidered as medicines of equal efficacy, we might ſuppoſe that there is no neceſſity for limitation in our ſelection—but we ſhall find that ſome will be efficacious in one conſtitution, and not in another—for where fœtids agree, the odoriferous ones will, very often do not—and ſo on the contrary; therefore, where one claſs has been tried ineffectually, we muſt have recourſe to the other. And here alſo it will be uſeful to obſerve, that very often, for want of giving theſe medicines in full doſes, their effects have not been produced; conſequently it is proper to increaſe them, very often freely, till that point can be properly aſcertained.

The following ſupplies the uſeful catalogue of ANTISPASMODICS.

From the Vegetable Kingdom.

PENNYROYAL—		
Infuſion—		
Diſtilled water—		
Eſſential oil,		from 1 to 5 drops.
RUE—Extract,	P. 230.	from 10 to 20 or 30 grains
SABINE—Extract,		from 6 to 20 grains.
Powder,		20 to 30 grains.
ASA FOETIDA—		from 5 grains to 20.
Tincture,		½ dram to a dram.
GUM AMMONIAC—		from 10 to 20 grains.
Milk of,		1 ounce to 1 and ½.

GALBA-

GALBANUM—Tincture, from 10 drops to 60.
CAMPHOR— from 5 to 20 grains.
Mixture, { ½ an ounce to an ounce or more.
Spirit, for external application.
VALERIAN—Powder, from ½ dram to 2 drams.
Tincture, 1 to 2 drams.
Volatile, 1 to 1 and a ½ or 2 drams.

From the Animal Kingdom.

MUSK— from 10 to 30 grains.
Mixture, from 1 to 2 ounces.
CASTOR—Powder, from 10 to 20 grains.
Tincture, from 20 to 60 drops.
AMMOINIA prepared, and SALT OF HARTSHORN, } from 3 to 20 grains.
Liquor, from 20 drops to 60.
Oil, or animal oil, from 5 to 30 drops.

From the Foſſile Kingdom.

AMBER—Oil, rectified, from 5 to 20 drops.
Salt, purified 5 to 15 grains.

Though this ſalt, notwithſtanding it is ſometimes given in hyſteric caſes, more properly belongs to the diuretic claſs, as allowed to be a promoter of the urinary evacuation.

ROCK OIL—externally applied, as is alſo the oil of amber, in rheumatic and paralytic caſes.

All the eſſential and empyreumatic oils are of this claſs.

ÆTHER—vitriolic, { externally applied—doſe from 20 to 60 or 80 drops.

Spirit of vitriolic æther,	20 to 60 or 80 drops.

To two articles, which we have ſpecified here, beſides their antiſpaſmodic power, others have been attributed of no leſs conſequence—which, as medicines eaſily attainable, we ſhall particularize.

RUE has been recommended in caſes where viſcid phlegm has abounded, and the circulation of the blood been languid. As an attenuant, reſolvent, and deobſtruent it has been much extolled; alſo in hyſterical caſes; and as a promoter of the menſtrual diſcharge. BOERHAAVE had the higheſt opinion of it. CULLEN ſays, it is certainly an uſeful medicine. It is beſt given in conſerve, from half a dram to half an ounce, two or three times a day.

SABINE. This is conſidered as a warm aperient medicine, increaſing glandular ſecretions, and a powerful promoter of the menſes. It is a very heating and acrid ſubſtance, and therefore requires much caution in the adminiſtration. Dr. CULLEN thinks it more powerfully determines to the uterus than any other medicine—of which truth experience has often convinced me. Dr. HOME, out of five patients labouring under obſtructions of the menſtrual diſcharge, cured three, or rather four, by giving half a dram of the powder twice a day, though a dram is the doſe commonly recommended. Of the extract, from ſix to twenty grains is a doſe. Externally applied, it has been eſteemed a powerful deſtroyer of fungous excreſcences, in taking off venereal warts, where other applications have failed.

§ 3. SEDATIVES. This is derived from the Latin word *ſedo*, to aſſuage, reſt, calm; and they properly belong to ſuch ſubſtances as diminiſh motion in the ſyſtem, and the force of the moving powers—and alſo alleviate pain.

Hence, whatever diminiſhes motion in a part, or in the whole of the ſyſtem, whether by rendering it inſenſible to any painful ſtimulus, or by arreſting, by any means, the impulſe of the vital powers, may be called ſedative. All medicines, therefore, which cool the habit, or take off inflammation—ſome of the acids—neutral ſalts—emollients—aſtringents—and antiſpaſmodics, may properly come under this head, as they diminiſh motion in the ſyſtem—but in this place our objects are limited to the conſideration of ſuch ſubſtances only as are thought particularly to act on the nervous power.

With regard to the preciſe mode of action of thoſe ſelected to form this claſs, we can ſay very little, as our knowledge of the nervous ſyſtem is ſo incomplete. However, thus far we may venture to aſſert, that they act either by having a peculiar power of reſtraining the violence, or rendering more equal the irregular motions of the nervous power, by their influence on the common ſenſorium, and its appendages primarily, (68.) or by blunting the irritability of the living ſolids, and thus preventing the ſame power from exerciſing too forcibly its influence. And this they do either ſympathetically, by having their action more diffuſively communicated from the part they firſt affect; or by the locality of their action, when they are applied to the parts themſelves; for it has been proved,

that the heart taken out of the body, has been made to act by the application of ſome ſtimulus, and conſequently, that this power of contraction was dependent on ſomething foreign to the influence of the common ſenſorium, or nerves, which was certainly inherent in the muſcular fibres themſelves; and if opium is diſſolved and thrown upon the heart ſo ſeparated from the machine, no action from ſtimulus will take place—which proves, that, by means of this ſedative ſolution, irritability is deſtroyed.

And it is commonly known, that if a ſmall doſe of opium be taken on the ſtomach, it will alleviate pains of the extremities, and other parts diſtant from that organ, very expeditiouſly, as well as procure ſleep.

If then we take the influence ſedatives have on the common ſenſorium, and the irritable power, inherent in the muſcular fibres of the ſyſtem, we ſhall be poſſeſſed of the moſt certain known idea of the operation of medicines of this claſs; and be furniſhed with the knowledge *where*, *how far*, and *in what mode*, the application of theſe ſubſtances may be ſerviceable, or hurtful, in ſo far as they act as ſedatives; but it muſt alſo be remembered, that ſome of them are ſtimulants.

Hence then, in all caſes where there is too great a rapidity in the circulating fluids, or pain, or ſpaſm from an inflammatory cauſe, they would be hurtful, otherwiſe they are in general ſerviceable. In caſes alſo of infarction, or ſtrong obſtruction, which ſometimes happens in the lungs, though attended with ſpaſms, they muſt be cautiouſly uſed. But where neither of theſe objections occur, they may be allowable, and attended

tended with uſe in diminiſhing the force and celerity of the blood's motion, where morbidly augmented, or the impetus of the blood againſt parts ſimilarly affected, in abating violent pain, and procuring ſleep in caſes of preternatural watchfulneſs, in reſtraining inordinate motions, and moderating exceſſive evacuations.

But where the circulation is preternaturally languid, or there is a lethargic or drowſy diſpoſition, or a high degree of torpor in the ſyſtem, to them in theſe caſes we ſhould not have recourſe.

According to the purpoſes they have been given to effect, they have received different appellations—if to alleviate pain, *anodyne*; if to abate it by their demulcent power, *paregoric*; if by bringing on ſtupor, *narcotic*; if by inducing ſleep, *hypnotic*; however, their action is ſimilar, and requires no ſuch diſtinction. They are more properly divided into ſuch as produce ſleep, as opium, henbane, poppy; and ſuch as alleviate from their cooling property, as neutral ſalts, acids.

Our catalogue of SEDATIVES, of which opium is the principal, conſiſts of

POPPY—Syrup of,	2 drams to 1 ounce or more.
OPIUM—purified,	from 1 to 2 grains.
Tincture,	as a ſedative, from 5 to 10 drops—as procuring ſleep, 10 to 25.
Camphorated,	from 5 to 60 drops.
CICUTA—Hemlock,	
Inſpiſſated juice, Powder,	2 grains and gradually increaſed.

HEN-

HENBANE—

Powder, Extract, } 1 grain to 5 and more.

TOBACCO—

Smoke, Infuſion, Glyſter, Extract, } See page 237.

Of all theſe medicines, however, we think it neceſſary to give a more particular account—and, firſt,

The POPPY HEAD is in uſe for making a ſyrup, poſſeſſed of virtues to relieve pain, and procure ſleep—for theſe purpoſes, it is chiefly given to children, in doſes of from half a ſcruple to half a dram or more; and it will be efficacious ſometimes, where opium and its preparations are apt to diſagree with the conſtitution.

It is alſo uſed for making fomentations for alleviating pain, particularly after proper evacuations in inflammations of the eyes and breaſts.

OPIUM is *anodyne*, from its relieving moſt painful affections—*hypnotic*, from procuring ſleep—*incraſſant*, from thickening the humours—*diaphoretic*, from increaſing perſpiration; and, joined with ipecacoanha, antimonials, camphor, volatile ſalts, and ſuch like, the moſt powerfully ſo of any medicine with which we are acquainted—*ſedative*, from allaying the too great irritability of the nervous ſyſtem—and the moſt efficacious *antiſpaſmodic* in the materia medica;—taken in too large quantity, it renders the nervous ſyſtem ſo totally inſenſible, produces ſuch general relaxations, that lethargy,

thargy, convulſions, and death, are the conſequences; but, in a variety of caſes, given judiciouſly, it is one of our moſt noble remedies, particularly where nervous incitability, or thinneſs or acrimony of the humours are too prevalent in the conſtitution, admit too great degree of fever, or heat, or fixed obſtructions, do not contra-indicate its uſe.

Hence the benefit ariſing from its adminiſtration in hyſteric and hypochondriac diſeaſes; in convulſions from violent pain; in too great watchfulneſs, at the latter end of fevers, ſmall-pox, and meaſles; in coughs, from acrid, ſtimulating defluxions; in looſeneſs, and dyſenteric complaints, called bloody fluxes, very often. It has been ſaid to cure the venereal diſeaſe. That in irritable habits it aſſiſts the operation of mercury, by preventing the too powerful exertions of mercurial ſtimulus, alleviating pain, and promoting inſenſible perſpiration, will not be denied; but it being of itſelf curative, I cannot believe—though, after the humours have been rendered too thin and acrimonious by the uſe of mercury, I will not diſpute its power; for I have ſeen its good effects, in totally removing what have been called rheumatic pains from that ſource.

Aſa-fœtida joined with opium is ſaid to weaken its narcotic effects, and prevent that ſtupor, heavineſs, and vertiginous affections, which opium is apt to occaſion after its operation.

Beſides, this medicine not only alleviates pain, and takes off ſpaſmodic affections, when adminiſtered internally—but when applied externally, as in fomentations,

tions, cataplaſms, lotions, liniments, or injections, it produces the ſame conſequences.

HEMLOCK has been much uſed in ſcrophulous, ſcirrhous, and cancerous caſes;—in the laſt highly recommended by Dr. Storck, as a ſucceſsful medicine, though not anſwering the expectations of the phyſicians of this country; notwithſtanding which, I heſitate not to declare, I have found it in ſome degree ſerviceable in ſcirrhoſity—in ſcrophulous tumours, joined with bark, it has been uſeful; as alſo in ulcers, and foulneſs of the bones from that cauſe;—in ſome obſtinate rheumatic caſes it has been efficacious, and I have evidently ſeen it produce good effects in the chincough. Joined with mercury, it has been uſeful in venereal complaints, and has been ſucceſsfully given in ſome cutaneous diſorders.

It is commonly given in doſes from four or five grains to a ſcruple, and puſhed on to one or two drams in twenty-four hours—half an ounce has been given in that time; and, in one or two caſes, Dr. MONRO ſays, he has known an ounce. However, Dr. CULLEN remarks, and that with great propriety, that if ſome ſenſible effect is not perceived, when the doſe is about twenty grains, he ſhould diſpute the goodneſs of the medicine, and have recourſe to different parcels of it.

HENBANE. This has been conſidered as a narcotic, not producing heat like opium: and, beſides, it is, in large doſes, laxative, evident advantages over opium. In palpitations of the heart it has been ſaid to be uſeful—in caſes of mania and convulſions, in doſes of the extract from

from one grain to five. Though STORCK extols the remedy in ſpaſmodic affections, and profuſe bleedings; yet, from Dr. HOME's experience, it appears in theſe affections not to produce any good effects. It ſeldom produces ſleep, or alleviates pain, except till the doſe is arrived at eight or ten grains, nay, often it has been obliged to be increaſed to fifteen or twenty; though, in full doſes, it is more apt to occaſion delirium than opium. Sometimes it will agree where opium will not; and it is not, except in large doſes, that its aperient effects are very remarkable.

From a caſe related by Sauvages of its curing a cataract I once, under thoſe circumſtances, tried it, with evident utility; but, during the trial, my patient left town, nor have I heard what was the ultimate reſult. However, ſuch were its effects under my inſpection, that I ſhould, in all caſes of recent cataractous appearances, recommend the trial.

TOBACCO, though in common uſe, and certainly conſidered as a luxury, from being chewed, taken in ſnuff, and ſmoked for pleaſure, is a deleterious and noxious herb, poſſeſſed ſtrongly of thoſe powers producing ſtupor; hence conſidered as narcotic. It is highly ſtimulant, a powerful emetic, purgative, and promoter of the ſalivary diſcharge;—applied by way of poultice to the ſtomach, we are told it excites vomiting, and produces the ſame effects applied to wounds. In the iliac paſſion, incarcerated ruptures, and obſtinate coſtiveneſs, thrown up into the bowels, by way of ſmoke, or in ſtrong infuſion, it has proved efficacious—and alſo in caſes of worms, particularly

thoſe

thoſe very ſmall white worms, called *aſcarides*, which affect the lower part of the large bowel, called rectum, occaſioning itching in the anus:—Indeed, it is ſaid that no remedy is more powerful in opening the bowels, procuring ſtools, and in deſtroying and bringing away theſe worms, than this—though it muſt be obſerved, that given in this method, it will often produce great ſickneſs and vomiting, eſpecially if puſhed far into the inteſtinal canal.

In Sweden it is a domeſtic medicine, and often given to vomit and purge, in the beginning of putrid fevers. An extract made of it, which renders it more mild in its operation, has long been uſed in Germany as a pectoral in coughs—and, of late, in this country, recommended as a powerful diuretic, and of great uſe in dropſies;—but its inefficacy in ſmall doſes, and from its producing ſevere ſickneſs and vomiting, in large ones, ſuch as were ſufficient to make its diuretic effect apparent—from the nauſeouſneſs of its preparations, and the roughneſs of its action; it has not yet been brought into general uſe internally. Externally applied, BERGIUS conſiders it as efficacious in diſcuſſing that tumefaction of the prepuce (65) called phymoſis.

§ 4. ERRHINES. This claſs of medicines, ſo called from the Greek *en*, in, and *rin*, naſum, the noſe, or STERNUTATORIES, from producing ſneezing, are all ſuch as ſtimulate the internal membrane of the noſe, occaſioning a flow of mucus from thence, or cauſing that action from whence they derive their name.

They

They act altogether by their ſtimulus; and though they have been ſaid to have effect upon the fluids, they do it in no other way, than by increaſing the action of the ſolids on their contained liquids. Indeed all evacuants are general ſtimulants. Even theſe medicines carried into the ſtomach, or thrown upon other parts of the machine, would produce ſuch effects as were conſiſtent with their irritating power, and might vomit, produce gentle ſweat, or urine, or become expectorant, according to their elective properties.

The uſe of theſe medicines, though much inſiſted on by the ancients, have, by the moderns, fallen into neglect, though they may in ſome caſes certainly be of no ſmall ſervice, either in unloading the parts contiguous to the noſe, or removing obſtructions by the ſhocks given to the ſyſtem in ſneezing.

Where the mucus ſecretion is defective in the noſe, producing a morbid diminution, by determining the fluids there, they might be of ſervice; or by occaſioning a derivation from parts morbidly affected in the neighbourhood of that organ—alſo by agitating the ſyſtem in general, and by obviating nervous affections of the convulſive or ſpaſmodic kind—but where there is great fulneſs of the habit, morbid debility of the viſcera, uncommon ſenſibility of the noſe, or ulcerations of that part, and thoſe which are contiguous, the uſe ought certainly to be forbid.

From conſidering the operation of theſe medicines, and the effects likely to be produced by the application, we may learn how they become uſeful in rheumatic affections of the head; for temporary relief has

not

not only been acquired by them, but the rheumatic diſpoſition conquered—the tooth-ach alſo, and other rheumatic affections. In chronic and long-continued inflammations of the eyes, in opacities, or cloudineſs of that part of the eye called cornea, beginning cataracts, and in ſome caſes of deafneſs.

In ſome complaints of the head of the ſpaſmodic kind, they promiſe much utility; but in all full habits, or in caſes where there appear any preternatural load in the head, they are not only doubtful, but may ſometimes become dangerous.

And notwithſtanding it has been aſſerted, that their uſe tends to remove lethargies, epilepſies, palſies, apoplexies, head-achs, vertigos, catarrhs, gutta ſerena, &c. and may, in ſome particular ſpecies of theſe complaints, where the nervous ſyſtem is primarily affected, be attended with no ſmall advantage; ſtill ſhould there be fullneſs of habit in people thus afflicted, prudence ſhould direct us to have that fullneſs taken off before the application of ſternutatories. During their uſe, we ſhould carefully avoid cold, for that has ſometimes produced unpleaſing effects;—they ſhould alſo be adminiſtered at intervals of one or two days, and then the patient ſhould be kept warm. From the general ſhock they give to the ſyſtem, they have been ſaid to be more beneficial than vomiting, and hence alſo greatly uſeful in removing the remoteſt obſtruction.

Errhines conſiſt of two claſſes—

Mechanical, Medicinal.

The First are, duſt—feathers—animalcules vellicating the membrane of the noſe, and blood accumulated,

lated, either from obſtruction or inflammation—whence it happens that in a beginning catarrh, the mucus of the noſtrils uſually flows pretty plentifully.

The SECOND—

Hyſſop	White Hellebore
Savoury	Orrice-root
Bete	Pellitory
Betony	Pepper
Marjoram	———
———	Euphorbium
Aſſarum	Turpeth Mineral
Herb Maſtich	Corroſive Sublimate.
Tobacco Snuff	

The firſt are eſteemed the mildeſt, the ſeven ſucceeding more active, and the three laſt the moſt violent in their operations;—but corroſive ſublimate is conſidered as inveſted with the moſt ſuperior power; for patients who have applied it, have ſneezed for ſome hours, although it has been uſed in very ſmall quantity.

There are different ingredients added together to form HERB SNUFF,

As the dried leaves of Aſarabacca
Sweet Marjoram
Syrian Herb Maſtich
Dried Lavender Flowers—

equal parts of each—but three parts of aſſarum and one of marjoram, beat into a fine powder, are ſuperior to moſt of thoſe ſold under the name of HERB SNUFF—and indeed are the more agreeable and efficacious errhines. If taken to the quantity of five or ſix grains at bed time, they are ſaid to operate the ſucceeding day as a powerful ſternutatory, inducing frequent

ſneezing, but ſtill more a large diſcharge from the noſe —and are often employed with great advantage in caſes of obſtinate head-achs, and inflammations of the eyes, reſiſting other modes of cure.

Sometimes in obſtinate deafneſs they have been given with ſucceſs, with the addition of a ſmall portion of turpeth mineral, and repeated at ſhorter or longer intervals, in proportion to the effect they produce of greater or leſs violence in their operation.

§ 5. SIALAGOGUES—derived from the Greek words, *ſialon*, ſaliva, and *ago duco*, to draw forth, comprehend all ſuch medicines as produce a flow of ſaliva into the mouth, from the glands named ſalivary, there ſituated.

They have been divided by ſome authors into three claſſes.

The FIRST—ſuch as immediately act upon theſe glands, as fomentation, friction, and ſuction, either internal or external of theſe parts;—hence, moreover, cataplaſms applied to thoſe glands, called parotid, from their ſituation under the ear, and chewing tobacco moiſten the mouth;—all pungent ſtimulants alſo.

The SECOND, are all ſuch as occaſion a flow of ſaliva into the mouth, by intercepting a flux of moiſture into other parts; for it is obſervable, that if any of the viſcera ſhould be obſtructed, as the liver, ſpleen, pancreas, at the ſame time the kidneys, or inteſtinal ducts, then is the mouth always moiſt—whence hypochondriac people are called SPUTATORES, from their ſpitting ſo much; and, therefore, whatever prevents a ſecretion of lymph in thoſe places, ſhould be eſteemed ſialagogue.

The

The THIRD CLASS takes in all thoſe ſubſtances which *are ſuppoſed to break down the ſanguinary maſs*, and by that means ſupply the mouth with too great a proportion of fluids, thus diſſolved.

Of this tribe quickſilver is the principal, and may be applied in various modes.

From its external application a ſalivation may be raiſed, though in its crude ſtate—but it may be applied in form of liniment or fumigation; for if twelve grains of quickſilver are placed upon a fire, or a heated iron, they will emit a ſmoke, which, received by the noſtrils, in two or three days will occaſion a ſpitting. It may be taken internally with the ſame intent, and ſucceed, if given in a ſmall quantity; but if in too large, it is apt to paſs off by the bowels; if handled much, and for a long continuance, ſimilar effects will be produced, as we learn from gold-beaters, who make great uſe of quickſilver, falling into ſalivations.

Quickſilver formed into a ſalt by ſublimation, if taken in ſmall doſes, if applied externally to wounds or ulcers, or if attracted by the noſe, has ſimilar conſequences, from its reception into the habit.

It was the opinion of BOERHAAVE and others, that all theſe effects were produced by diſſolving the fluids, either by its mechanical action, or by its diſſolving or putreſcent power.

Had not theſe doctrines been previouſly refuted by ſuch arguments as are uncontrovertible, from the conſiderations, that mechanical force never divides mixts, but aggregates only: that, from the minuteneſs of the diviſion of gold, even it may be made to become in-

capable of overcoming the coheſion of water or ſpirit of wine, and be ſuſpended in them—and alſo that the ſmallneſs of the quantity introduced would be inadequate to produce the effect. And, *with* regard *to its diſſolvent or putreſcent power*, that, during the operation of quickſilver on the habit, no ſymptoms of putreſcency appear in any part of the ſyſtem—that there is no alteration of the blood in that reſpect during a ſalivation, but its texture appears as ſtrong then as at any other time;—that ſalivation is attended with an inflammation, and the blood ſhews an inflammatory cruſt; and, *finally*, that after the operation of the ſalivation is over, no taint appears in the blood, but, on the contrary, the perſon is in better health than before, and gives marks of a firmer ſtate of it;—one ſingle inſtance would be ſufficient to overturn them, if we conſider that a few grains of calomel has in many conſtitutions raiſed a ſalivation very ſuddenly, which has continued for ſome days, nay weeks. Inſtances of which have fallen within the courſe of my own obſervation.

I cannot myſelf doubt of its producing its action in the ſalivary glands by the means of its elective ſtimulus, though it is capable of exerting its ſtimulus in other parts of the machine, as on the ſtomach, inteſtines, kidneys, and perſpiratory veſſels, producing, according to the parts affected, vomiting, purging, diſcharge of urine, and gentle perſpiration.

Indeed, upon the whole, it ſhould be conſidered as a ſtimulant in general, in particular a ſalivary one, and an evacuant, more peculiarly of the ſerous or lymphatic fluid, or both; and one of the moſt univerſal aperients

rients and deobſtruents we have in the whole catalogue of the materia medica.

In its combined ſtate, forming metallic ſalts, quickſilver ſooner exerts its activity on the ſyſtem, but leſs certain, I think, in its effects;—it appears more efficacious, having its parts only divided by ſome unctuous or oleaginous ſubſtances; and, perhaps, its virtue depends upon its being ſo entirely unconquerable by the aſſimilating powers of the conſtitution, and capable of ſuch minute diviſibility, for it will paſs through any body except glaſs.

Quickſilver, though here ranked as an internal ſialagogue, or a promoter of the excretion of ſaliva, becauſe its elective power ſeems to be more determined to the ſalivary ſyſtem, than any other part of the machine, may fairly be conſidered as an univerſal ſtimulant, deobſtruent, purgative, and general evacuant, increaſing the whole of the excretions of the human body.

It was thought that, from the great diſcharge it produced from the ſalival glands, and the fœtor accompanying it, that it diſſolved the texture of the blood, and diſpoſed it into putrid acrimony; but experience proves the caſe to be far otherwiſe, as we have proved above.

The great effects produced by quickſilver ſeem to proceed from its increaſing the whole of the animal excretions, and thus carrying off the virus of the pox, for the cure of which it is the moſt remarkable and certain;—and, indeed, it has been, and ſtill continues to be, by many, conſidered for this diſeaſe a SPECIFIC;—

but as it will not by itſelf, in all caſes, cure that complaint, nor prevent the venereal poiſon from taking effect, even in conſtitutions loaded with it, that idea muſt fall to the ground.

Though quickſilver, in its original ſtate, is inactive reſpecting the human machine, and only has been given in this ſtate to conquer obſtinate obſtructions of the inteſtines, though inefficaciouſly, ſtill from mechanical diviſion, as united with viſcid, oleaginous, or unctuous ſubſtances, rubbed down with dry powder calcined, or united with different acids, forming mercurial ſalts, it has been rendered extremely active; and though preparations of this abound, the chief uſe are confined to a few.

GUMMOUS mercurial pill,	from 20 to 30 grains.
MERCURIAL pill,	from 8 to 12 grains.
QUICK ILVER acetated,	from 1 to 6 grains.
Calcined,	from $\frac{1}{4}$ of a grain to 2 grains.
Muriated, or corroſive ſublimate	from $\frac{1}{8}$ of a grain to 1 grain.
Mild muriated, CALOMEL prepared,	$\frac{1}{2}$ a grain to 2 grains or more
QUICKSILVER with chalk,	from 5 to 20 grains.
White calx of quickſilver, or white precipitate.	too acrid for internal uſe.
Sulphurated quickſilver, or æthiops mineral,	from 10 grains to 40.
Red ſulphurated quickſilver, or factitious cinnabar,	uſed chiefly in fumigation.
Red nitriated quickſilver, or red precipitate,	uſed as a deſtroyer of fungous fleſh, or for dreſſing venereal ulcers.

Vitriolated

Vitriolated quickſilver, or turpeth mineral,	from 1 grain to 4.
Quickſilver ointment,	for external uſe—from ½ a dram to 2 drams.

Now ſeveral of theſe preparations are appropriated to different purpoſes. The MILDER SORT, as *alterants*—

Gummous pill	Acetated quickſilver
Mercurial pill	Quickſilver with chalk;

or the more active preparations in very minute doſes, which in this view are conſidered as the moſt efficacious.

As a purgative, *calomel* claims the preference, joined with rhubarb or ſome other of that claſs—in doſes of from 3 to 8 or ten grains; and in ſmaller doſes as deobſtruent and alterant.

In venereal caſes, the gum and mercurial pill—calomel—corroſive ſublimate diſſolved in brandy—calcined mercury joined with opium—are chiefly had recourſe to.

Againſt the itch, the white precipitate, made into an ointment.

The quickſilver ointment is alſo uſed for raiſing a ſalivation where thought neceſſary, or loading the conſtitution ſufficiently without producing that effect, for the cure of venereal complaints.

Indeed calomel, and ſome other of the active preparations, have proved efficacious in the early ſtages of inflammatory complaints of the breaſt, brain, pleura, &c. when given freely, in repeated doſes, ſometimes with, ſometimes without opium; which has been, in theſe caſes, rendered more effectual by joining ſmall

doſes of the antimonial powder along with it. In ſpaſmodic complaints, united with camphor and opium, they have been ſaid to be effectual—as alſo in dropſical caſes, given in conjunction with diuretics and aromatics, particularly the ſquill pill. But theſe we ſhall particularize more minutely when we come to treat of diſeaſes to which they are appropriated.

Now, from keeping in view the peculiar virtues of this medicine, the reaſon will readily occur why in a variety of complaints it is ſo beneficial—as in the venereal diſeaſe—glandular obſtructions—cutaneous complaints—obſtructed menſes — dropſy — worms—ſome inflammations of the lungs and other parts, properly applied, and judiciouſly united with other well-adapted remedies.

Thus much have I thought requiſite to ſay relative to this ſo extenſively uſeful a remedy; though in this place we ſhould conſider it merely as a promoter of the ſalivary diſcharge, in order that we may be better prepared for diſcovering its utility in a variety of different caſes, on which we ſhall in future treat. Here it ſtands as a ſialagogue, and the only internal one of which we make uſe—the others in this catalogue are ſtiled topical, from their promoting the flow of ſaliva from external application—the principal of which are

Squills	Cloves
Tobacco	Maſter-wort
Angelica	Pellitory.

From what has been ſaid, we ſhall readily diſcover their utility to conſiſt in diminiſhing the force of the blood againſt parts morbidly affected in the neighbourhood

hood of the ſalivary glands; and alſo the action of the veſſels when morbidly increaſed in the neighbouring parts, as in ſome caſes of tooth-ach and rheumatic affections; and in promoting the circulation of the blood freely through the ſalivary glands when morbidly obſtructed there:—Beſides, as they ſo freely promote evacuation, they will be beneficial in evacuating morbid accumulations of ſerum; in producing a thorough change in the fluids of the body when morbidly vitiated.

But when there appears to be an uncommon determination to the ſalivary glands—any præternatural ſenſibility in the glands—when the ſerous part in the circulatory fluids is defective—or there is a high degree of inanition, or general debility of the ſyſtem, we muſt avoid uſing them.

§ 6. EXPECTORANTS, ſo named from the Latin word *expectoro*, to throw out of the breaſt, or expectorate; and are all ſuch ſubſtances as expel morbid matter through the windpipe adhering in its branches, called bronchia (19, 20,) of the lungs.

To promote which purpoſe, ſeveral particulars are neceſſary to be obſerved. It is required, FIRST, *that* the matter contained within them ſhould be rendered moveable, and capable of being expectorated, taking care that the moſt fluid part ſhould not be diſſipated, leſt the remainder ſhould be left too viſcid, and not eaſily pumped up from the lungs;—hence medicines too heating and ſtimulating are hurtful;—SECOND, *that* the paſſages of the lungs ſhould be open, cleanſed, and lubrica-

lubricated;—THIRD, *that* the excretion of the offending matter ſhould be promoted, which is beſt performed by coughing, to which end proper ſtimulus, and proportionate ſtrength are required;—FOURTHLY, *that* the obſtructed veſſels ſhould have reſt, by which means they may be relaxed—for ſhould they be continually irritated, the humour from the glands of the windpipe would be ejected with a ſort of pain.

To accompliſh the FIRST intent, all aromatic bitters, and, at the ſame time, mild oleaginous ſubſtances are neceſſary, ſuch as hore-hound, hyſſop, elecampane, pennyroyal, valerian, &c. and ſulphureous medicines mixed with alkalies—all fixed ſaponaceous materials, as Venice ſoap in pills, or mixed with milk; —all volatile oily ſoaps, and volatile fixed ſalts, and, in general, all diluents and ſtimulants mixed together.

For the SECOND purpoſe, we muſt apply to aperients and detergents, as oil of poppies, almonds, olives, honey particularly, as it is aperient, inciding, attenuant, detergent, and lubricating—here alſo belong emulſions, ſoaps, yolks of eggs, with oily ſubſtances, ſaccharine ſubſtances, at leaſt in ſmall doſes; likewiſe balſams, as that of turpentine, Peru, Gilead, Copaiva, &c. which act both as ſtimulant and lubricating—to theſe we may add all relaxing and emollient decoctions.

For the THIRD are uſeful all thoſe which excite a cough, as wine, vinegar, acrid ſpirits, ſternutatories, ſquills, gum ammoniac, &c.

And, for the LAST, demulcents, anodynes, and narcotics, are proper, of which the principal is opium; for

for when the windpipe is once excoriated, it is eaſily thrown into violent ſpaſms, and cough, which cannot be reſtrained by that powerful ſedative.

However, we may in general obſerve, where there is no inflammatory tendency, and the moving powers are torpid, ſome of the ſtronger ſtimulants are extremely uſeful, and are the things which chiefly contribute to promote expectoration; but they ſhould be very cautiouſly uſed in diſeaſes of the breaſt, and particular care taken, that the habit be free from any inflammatory diſpoſition, or, at leaſt that no inflammation is fixed there—for where theſe take place, relaxing the veſſels, and taking off the ſpaſms is all that is wanted, for in ſuch conſtitutions the mucus itſelf ſupplies ſufficient irritation, either from its acrimony or weight, or diſtenſion of the cells of the lungs.

From what has been ſaid, the utility of expectorants appears—when the ſecretion of mucus in the lungs is obviouſly diminiſhed, by promoting that ſecretion, and rendering the mucus thinner, when too thick or viſcid—where the excretion is inſufficient, by evacuating morbid accumulations of mucus in the lungs, and ſupplying irritation to that organ when defective.

When the lungs labour under a ſtate of morbid inſenſibility, by removing that, and promoting a free circulation through them, when it is there morbidly impeded.

But when there is a high degree of increaſed ſenſibility in the lungs, and an uncommon quick excretion of mucus from them, the ſtimulant expectorants ought to be prohibited; and when there is too great a ſtate

of

of torpor, of the relaxing ones we ſhould by no means make uſe.

Our general catalogue of EXPECTORANTS, of which we ſhall furniſh, for the reaſons above advanced, a proper diviſion, conſiſts of

Hyſſop, Hore-hound, Ground-ivy, Penny-royal, Colt's-foot, chiefly uſed in infuſion or decoction, and ſweetened with honey
Garlic
Muſtard
Horſe-radiſh
Onions
Leeks
Balſam of Copaiva
Gum Guaiacum
Myrrh
Aſafœtida
Gum Ammoniac
Opium
Tobacco ſmoke
Acid vapours
Bliſters
Warm baths to the feet
Watery vapour received into the lungs.

Now, as we find expectoration is to be promoted by different means, agreeable to the cauſe acting in the lungs; and as our ſelection here has ſuch different properties, all of which are calculated to promote the deſired end by judicious application, a diviſion of them, agreeable to their powers, becomes neceſſary. FIRST, into ſuch as act by ſtimulating the lungs taken internally.

The infuſions of Hyſſop,
Ground-ivy,
Hore-hound,
Coltsfoot,
Pennyroyal, made into tea, and ſweetened with honey,

GARLIC,

GARLIC,	a clove of it taken now and then in ſubſtance, formed into pills, or made into ſyrup.
Muſtard, Horſe-radiſh, Onions, Leeks,	eat plentifully with other viands.
BALSAM Copaiva,	Doſe, 20 to 40 drops on ſugar.
GUM Guaiacum—	
Powder,	from 6 to 20 grains.
Tincture,	½ a dram to 1 dram.
—— MYRRH—Powder,	10 grains to 60.

SECOND, ſuch as act from taking off ſpaſmodic affections—

ASA fœtida, GUM Ammoniac,	See catalogue of Antiſpaſmodics.
OPIUM,	See Sedatives.

BLISTERS,

WARM baths to the feet,

WATERY vapour inhaled into the lungs.

THIRD, ſuch as irritate—

TOBACCO ſmoke,	ACID VAPOURS.

FOURTH, ſuch as lubricate and relax. See the catalogue of Demulcents, all which belong to this place.

§ 7. EMETICS. This is a Greek word, from *emeo*, vomo, to vomit; by the Latins they are called *vomitoria*, and are all ſuch ſubſtances which, by their action, cauſe the ſtomach to reject its contents upwards.

The

The effects produced by this action have been divided into eight heads; in conſidering which we ſhall be enabled to perceive the utility to be derived from the application of theſe remedies; on which, as we go along, we ſhall furniſh ſome remarks neceſſary for the more clear elucidation of different parts of the ſubject;

FIRST. "Vomiting evacuates the contents of the "ſtomach itſelf; though it is not eaſy to know when "that is fully performed. Many have got into a me-"thod of promoting few repetitions in vomiting, and "giving ſmall ablutions; but it has by others been "thought, that frequent ablutions are required to "clear the folds of various matters, or mucus, which "may be detained within them."

If we wiſh to evacuate the contents of the ſtomach completely, frequent and copious ablutions are certainly right; but it is ſometimes neceſſary to give gentle ſhocks only to promote ſome particular purpoſes, and theſe muſt be often repeated, ſo that it would be hurtful to puſh vomiting to its extent, as, from violent ſtraining of that organ, it would become too relaxed, and our intent fruſtrated; for it is from the repetition of the operation gently, not from unloading the ſtomach, ſucceſs is expected.

SECONDLY. "Vomiting cauſes a flow of liquids to "the ſtomach, clears it, and emulges its mucus glands." and,

THIRDLY. "It not only emulges the mucus folli-"cles of the ſtomach, and promotes a flow of gaſtric "liquor, but has the ſame effect on the neighbouring "glands, eſpecially the ſweetbread and the liver."

FOURTH-

FOURTHLY. " Whilſt the vomiting continues, it " not only inverts the regular motion of the ſtomach, " called *periſtaltic*, but alſo of the inteſtines, which " pour out their mucus to be carried to the ſtomach, " and evacuated with its contents.

" Hence do we find vomits uſeful in looſeneſſes and " dyſenteries; but, independent of that, they are be- " neficial, more probably, as purging the inteſtines, " occaſioning a greater flow of liquors into the inteſti- " nal canal. If the vomiting ceaſes, the increaſed ſe- " cretion is carried off by ſtool, ſo that at any rate the " adherent foulneſs is waſhed away, by ſqueezing the " tract of the inteſtines."

FIFTHLY. " Vomiting ſqueezes, and occaſions a " conſtriction of the whole abdominal viſcera, eſpe- " cially the meſenteric glands, (50) and in conſe- " quence pumps the whole Lymphatic ſyſtem;—on " this account increaſes abſorption, as well as from its " evacuating property; hence for theſe purpoſes eme- " tics anſwer equally well with purgatives, and may " be uſeful in dropſical caſes."

But here we ſhould be careful no ſtrong viſceral ob- ſtructions hath taken place, or any great acrimony in the humours, and tenderneſs of the vaſcular ſyſtem, for in theſe caſes they may be productive of the moſt fatal effects.

SIXTHLY. Dr. Cullen thinks, " vomiting has the " power of affecting the kidnies, for as irritation of " the kidney will produce vomiting, ſo, on the other " hand, it is reaſonable to think, that vomiting may

" alſo

" alſo act upon the kidney—hence it would ſeem uſe-
" ful in propelling ſtones in the kidneys."

Notwithſtanding ſome have recourſe to ſuch a practice, and it appears imitative of nature, ſtill I ſhould conceive it *almoſt always* a dangerous experiment, *always* doubtful, and *often* not neceſſary; for if the ſtone ſhould be ſo impacted with the kidney that it cannot paſs, irritation on the part would be ſtrongly increaſed, of courſe pain and inflammation in ſimilar proportion, moſt likely abſceſs, and their conſequences. Beſides, we never can be certain whether the ſtone is of ſuch a ſize as to paſs through the ureters (57) by any propulſive force; and if it ſhould, by relaxing the ureters as much as we can, by proper remedies, we are more likely to produce the effect, and certain to avoid all danger from too raſh a practice;—however, if the attempt at propulſion was to be made, every means ſhould be previouſly uſed to render the paſſages as diſtenſible as poſſible before the trial:—but of this we ſhall have occaſion to treat more fully in future.

SEVENTHLY. " But the effects are extended, per-
" haps, to the viſcera of the cheſt, as expectoration
" has been promoted by vomiting."

EIGHTHLY. " It alſo increaſes the conſtriction of
" the fauces, and forcibly emulges the whole of the
" ſalivary glands. It has had the effect of thoſe me-
" dicines called maſticatories, which, by chewing and
" increaſing a diſcharge of ſaliva, relieve rheumatic
" affections of the head, tooth-ach, &c.

" By preventing inſpiration, vomiting occaſions a
" regurgitation of the blood at the end of expiration.

" The

" The accumulating blood, which uſually happens, " produced by vomiting, is only momentary, and " may be ſoon counterpoiſed, as will be ſeen by con- " ſidering its advantageous effects on the ſyſtem in " general.

" During the time of vomiting, the pulſe is ſmall, " weak, and intermitting; but when it is over, if the " ſtimulus continues, the circulation is increaſed, with " a fullneſs and ſoftneſs of the pulſe, a determination " of the fluids to the ſurface of the body, and ſweat;— " this laſt may be ſuppoſed to proceed from an increa- " ſed circulation, but Dr. Cullen thinks it may alſo " from the conſent of the ſtomach and ſurface, and " that an antiſpaſmodic virtue takes place with regard " to the extreme veſſels, which is illuſtrated from " this; that emetics combined with other antiſpaſmo- " dics, (225) as opium, increaſe the power, ſo that " combined they become more efficacious diaphore- " tics," or *promoters of inſenſible perſpiration or ſweat*, " than each when alone."

Theſe are their primary effects, which, if we conſi- der cloſely, will be productive of a variety of others, infinitely a greater number, than by any claſs of medi- cines with which we are acquainted; and indeed from them I have ſeen the moſt ſerviceable conſequences ac- crue. Not but I think their uſe, in many caſes, ſhould be conſidered with the niceſt caution; for advantage- ous as they are, when properly applied; in the hands of ignorance, or inconſiderate raſhneſs, they become too often fatal.

If we conſider the general ſhock which emetics give to the ſyſtem, the evacuations they produce from the ſtomach, and the effects they have upon the nervous power, we ſhall be convinced of their utility; by reſtoring equality to the circulation, producing lymphatic abſorption, and removing obſtructions in the ſyſtem of blood veſſels—and in theſe ſenſes they may be conſidered as *irritators of the habit*;—as *evacuants*, from clearing the ſtomach of its contents, and morbid accumulations of ſecreted matters lodged there, and diſcharging alſo ſerous accumulations in different parts of the machine:—as *antiſpaſmodics*, from ſtimulating the nervous ſyſtem, and the moving powers through the machine in general, and alſo obviating violent affections of the nervous power.

But in all caſes of ruptures, or relaxation of containing membranes---in local inflammations of the internal viſcera---a high degree of morbid debility in theſe---and in fixed obſtructions, unconquerable by the force of the circulation, it has been adviſed that their uſe ſhould be avoided.

Still, notwithſtanding all theſe prohibitions, ſo apparently well founded, from the conſideration of the action of emetics, yet they have been adminiſtered in caſes of ſcirrhous viſcera, in local inflammations, and ſupernatural effuſions of blood; though in the two latter they ſhould never be attempted without firſt bleeding; though perhaps hæmorrhages may *now and then* require this operation; but of theſe there are very rare inſtances, as they are almoſt conſtantly attended by an inflammatory diſpoſition of the conſtitution.

In

In all congeſtions of the head, they are ſaid to be dangerous, in apoplexy, palſy, and in ſmaller collections in the veins of the brain. They would, doubtleſs, be extremely dangerous where theſe maladies ariſe from too great ſanguinary plenitude; but where from mere weakneſs of the nervous ſyſtem, or inability of the moving powers, I ſhould prefer their uſe to other remedies, at leaſt on their firſt appearance; nor ſhould I heſitate in preſcribing them in ſerous collections, where I was not afraid of any great relaxation of the veſſels, or ſyſtem of the ſolids.

The claſs of EMETICS in uſe are not numerous—indeed, three or four, where we conſider their action only in this point of view, are ſufficient, arranging them according to their mode of operation, or peculiar appropriation.

If expeditious vomiting is required, without much regard to more extended action,

White vitriol,	Doſe, from 10 to 20 grains.
Blue vitriol,	2 to 6 grains.
Infuſion of tobacco,	1 ounce to a pint of boiling water—1 ounce or more to a doſe, will be ſufficient.

If ſomething more is wanted, particularly a determination of the fluids to the ſkin,

Tartarized antimony,	Doſe 1 grain to 5.
Antimonial wine,	3 drams to 6.
Wine of tartarized antimony	1 dram to 2.
Ipecacuanha—Powder,	5 to 20 grains.
Tincture,	2 to 12 drams.

And in venereal caſes,

Vitriolated quickſilver, or turpeth mineral, } Doſe 1 to 4 grains.

In large doſes, ſome of the vegetable bitters and cathartics come under this claſs, as do alſo ſquills, aſarabacca, fox-glove, muſtard, and horſe-radiſh. Strong infuſions of the two laſt are given with ſucceſs in torpid, cold, phlegmatic habits.

Syſtematic writers hence, from their peculiar power, have divided them into

IRRIRATING EMETICS---as

Tartarized antimony,
Vitriolated zinc, or white vitriol,
Quickſilver, or turpeth mineral.

EVACUATING---as

Ipecacuanha, — Aſarabacca, — Squills.

HEATING---as

Muſtard, — Horſe-radiſh.

NARCOTIC---as

Tobacco, — Fox-glove.

§ 8. The next ſet of medicines in our catalogue are CATHARTICS, ſo named from the Greek word *kathairo*, purgo, to purge, and comprize all ſuch medicines as evacuate by ſtool.

Purging, ſays BOERHAAVE, is an evacuation of all thoſe things which can be thrown out of the body by ſtool from any part of the machine. And moſt authors have been very prolix on this ſubject, as the operation ſeems to be, and really is, of ſuch material conſequence to the conſtitution.

However,

However, we ſhall content ourſelves with a more conciſe view of their effects, and from thence be ſufficiently empowered to deduce their utility.

By their operation they unload the inteſtines, and increaſe the motion of the bowels downwards; by which means they clear the inteſtinal glands, and derive a greater quantity of liquids into them; they alſo empty the ſtomach downwards; they evacuate the pancreas and liver, and affect the ſpleen, and all the viſcera of the lower belly; they promote the abſorption of watery and other thin fluids, ſtagnating in any cavity; and, by continuance, purge the whole body; but in this laſt caſe induce debility, if too long perſevered in; hence are preferable to other evacuants.

They are apt to produce inflammation in the parts on which they immediately act. They cauſe revulſion from the head, by determining the blood into the large artery of the body, called the *deſcending aorta*, (21—23) and hence may be uſeful as promoters of the menſtrual diſcharge, waſhing off virulence in gonorrhœa, in ulcers, by evacuating the ſyſtem in general; and in thoſe of the inferior parts, by cauſing a greater flow of liquids to the part. They excite, or, at leaſt, increaſe inflammation in the inteſtines, nay ſome propagate the ſame over the ſyſtem; and, when thrown into the blood, are moſt of them expectorant and diuretic, cauſing evacuation of phlegm from the cheſt, and urine through the kidneys.

Now theſe purgative effects are produced chiefly by ſuch things as irritate the fibres and muſcular parts of the inteſtines; but *paſſions of the mind* will alſo pro-

mote inteſtinal diſcharge; and ſome will have that occaſioned from *ſmell alone*, others from *external application*, ſome *from the diminution of inſenſible perſpiration*, but this happens in a moiſt thick atmoſphere, and others *from external motion*, as that of a ſhip or carriage;—upon the whole, it is tolerably concluſive, that purging ariſes from inteſtinal ſtimulus, either mental or corporeal.

But, notwithſtanding the uſe of purgatives are ſo very ſalutary in their different degrees, according to the cauſes requiring them, yet, by being too frequently renewed, they are apt to weaken the tone of the inteſtines, and indeed their ſenſibility. Hence are produced, if we add the conſequences of evacuation, often irregular ſpaſmodic affections.

Dr. CULLEN ſays, that all purgatives are endowed with an inflammatory acrimony, not only exciting it in the part to which they are applied, but acting in the ſame manner, as poiſons; their ſtimulus, extended to the ſyſtem, produces and aggravates fever, and an inflammatory diſpoſition; and as it is chiefly directed to the rectum, they increaſe the piles, and extend their irritation to the paſſage from the neck of the bladder, called *urethra*.

We are led to diſcover, from the conciſe view we have taken of the ſubject, from whence their utility ariſes,—FIRST, as *evacuants*, from removing any morbid retention of the contents of the ſtomach and inteſtines—diminiſhing the quantity of circulating fluids, when too abundant for the ſtate of the ſyſtem at that time—and carrying off morbid accumulations of ſe-

rum·

rum. SECONDLY, as *ſtimulants*, by promoting the free circulation through the inteſtines in thoſe caſes where it is morbidly impeded—diminiſhing the force of the blood againſt parts morbidly affected—removing torpor in the muſcular fibres of the inteſtines—and reſtraining inordinate motion in theſe muſcular fibres, by ſtimulating them to regular and more conſtant action.

But we find that ſome of theſe have, beſides the powers enumerated, thoſe which are *cooling*, *aſtringent*, and *emollient*.

Hence, ſhould there be in the bowels any high degree of irritability, and the circulation ſhould there be morbidly accelerated, of the *ſtimulating claſs* we ſhould make no uſe—if the circulation ſhould be uncommonly ſlow and languid, thoſe which are ſtiled *cooling* will be improper—if habitual coſtiveneſs be an error of the habit, the *aſtringents* muſt be wrong—and where uncommon relaxation of the inteſtines is prevalent, the *emollient* ought not to be applied.

The whole catalogue of PURGATIVES are EVACUANTS, and in this view differ only in degrees of power. The MILDEST of which are all aceſcent fruits.

Of the SECOND ORDER are

Tamarinds—Caſſia — Sugar — Honey—Manna—Water drank copiouſly—Milk whey—Butter-milk—Spinage—Bete—Cabbage—Succory — Dandelion — Endive—Lettuce—Celery — Aſparagus—Artichoke —Muſhroom.

Of the THIRD

All mild animal and vegetable oils—Venice Soap—Muſtard—Sulphur—Animal Bile—Gum Guaiacum—

Tartar—fixed alkaline Salts—neutral Salts—Magnesia, *if it meets with an acid*, not otherwiſe.

Of the FOURTH—or more acrid,

Aloes—Rhubarb—Senna—Jalap—Scammony—Buckthorn Berries—Gamboge—Hedge Hyſſop—Bitter Apple—Wild Cucumber.

Of the FIFTH—or moſt acrid,

Solutions of Gold or Silver in particular acids; but theſe, from the violence of their effects, are out of uſe.

Emetics alſo got into the bowels prove purgative.

But as we find great uſe may be derived from a judicious ſelection under particular circumſtances, we ſhall purſue the ſubſequent diviſion.

COOLING APERIENTS AND PURGATIVES.

Aceſcent Fruits
Sugar
Honey
Water drank copiouſly
Milk Whey
Butter-milk.

Spinage	Salary
Bete	Artichoke
Cabbage	Muſhrooms.
Succory	Theſe may be conſidered
Endive	as food proper to aſſiſt
Lettuce	in promoting the deſired
Aſparagus	purpoſe.
TAMARINDS—	taken in ptiſan or decoction.
CASSIA—Electuary,	doſe, 1 to 6 drams.

TAR TAR

TARTAR—

purified,
Cryſtal of Tartar, } 1 to 3 drams or more.

MAGNESIA, 10 to 30 grains.

NEUTRAL SALTS.

ACETATED Kali, or diuretic Salt, } from 1 to 2 drams.

TARTARIZED Kali, or ſoluble Tartar, } 2 to 6 drams.

VITRIOLATED Kali, or polichreſt Salt, } 1 to 3 drams.

TARTARIZED Kali, or Rochelle Salt, } 6 drams to 1 ounce.

VITRIOLATED Natron, or Glauber's Salts, } 6 drams to 1 ounce.

EPSOM Salt, from 4 drams to 1 ounce.

SULPHUR—

The Flowers waſhed, from 1 ſcruple to a dram.

Precipitated, or Milk of Sulphur, } 1½ ſcruple to 1½ dram.

EMOLLIENT APERIENTS AND PURGATIVES.

All bland animal and vegetable Oils, the moſt powerful of which are

CASTOR Oil, Doſe, from 1 dram to 1 ounce.

and, except this, few are given alone with this intent, but only to aſſiſt in the operation of other purgatives, where lubricating or relaxing materials are requiſite.

MANNA, from ½ an ounce to 2 ounces.

ASTRINGENT APERIENTS AND PURGATIVES.

Though almoſt all the ſmart purgatives leave the body coſtive after their operation is over, the aloetic medicines

medicines excepted, ſtill the reſtringent power, when wiſhed to ſucceed, is chiefly confined to

RHUBARB—Powder,

Ruſſia,	1 ſcruple to 1 dram.
Eaſt India,	10 to 30 grains.
Vinous Tincture, Spirituous Tincture,	½ an ounce to 1½ ounce.
ROSES—Syrup of	2 drams to 3 or four for children; to adults it is ſeldom given with this intent.

STIMULANT APERIENTS AND PURGATIVES.

MUSTARD—	
Infuſed in wine,	a table ſpoonful gently aperient.
ANIMAL Bile,	½ a dram to a dram.
GUM Guaiacum—Powder,	from 10 to 20 grains.
HEDGE Hyſſop—	
Powder—Extract,	5 grains to 10.
BITTER Apple—	
Compound Extract,	10 to 25 grains.
WILD Cucumbers—	
Inſpiſſated Juice,	½ a grain to 3.
ALOES—	from 5 to 15 grains.
Wine of Aloes,	6 drams to 2 ounces.
Tincture of Aloes,	6 drams to 2 ounces.
Aloetic pill with Myrrh,	10 to 30 grains.
SENNA—	
Powder, Extract,	from 1 dram to 2 ſcruples.

Tincture,

SENNA-- Tincture,	from 2 drams to 1 ounce.
Compound Powder,	from 1 to 2 ſcruples.
JALAP—	
Powder,	10 grains to 20.
Extract,	10 grains to 20.
Tincture,	2 to 3 drams.
Rezin,	5 grains to 10.
SCAMMONY—	
Compound Powder,	from 10 to 15 grains.
Powder with Aloes,	5 to 10 grains.
with Calomel,	from 8 to 20 grains.
BUCKTHORN Berries—	
Syrup,	from ½ an ounce to 1 ounce.
GAMBOGE,	from 2 to 10 grains—better mixed with calomel.

Before we cloſe the account of Cathartics, it may be of ſome uſe to obſerve; that, as in all conſtitutions, and all diſeaſes where too great an inteſtinal diſcharge does not conſtitute the complaint; and a moderate evacuation from the bowels is abſolutely requiſite; or in ſome a more copious one, it is neceſſary that we ſhould be acquainted with the particular nature of the purgative employed: that whilſt we are attempting to be of ſervice, by promoting the inteſtinal diſcharge, we may know what fluid each medicine will evacuate the moſt powerfully, and not in other reſpects be detrimental to the conſtitution by an improper choice—as in caſes of inflammatory complaints, it would be very injudicious to order purgatives highly ſtimulant; ſo in thoſe of bilious obſtructions of the liver from thick viſcid inert bile, to have recourſe to the ſerous and lymphatic

lymphatic purgatives would be injurious; as by theſe, though the intention reſpecting the operation might be right, we ſhould rather increaſe the original cauſe of the malady, by an improper election of the medicines of which we made uſe. However, here we only mention the neceſſity of ſuch a ſpecification, which we ſhall point out, on treating of particular defects of conſtitution, which require the neceſſary diſcrimination.

§ 9. DIURETICS, taken from the Greek word *diourco*, permeo, to make water, are all ſuch ſubſtances as cauſe urine to be ſecreted by the kidneys, and excreted by the bladder, which laſt is the repoſitory for that fluid.

Notwithſtanding the great labour different authors have beſtowed in properly ſelecting this claſs of medicines, and the confidence with which many have ſpoken reſpecting their operations, ſtill their effects are indiſputably uncertain.

How ſome things paſs off by urine ſo immediately after being taken into the ſtomach, is ſtill a matter of diſpute.

Some aſtringents have been conſidered of the diuretic claſs, from their action; and doubtleſs have produced this way very good effects, as the leaves of the bear's wortle berry, and bitters; nay ſome have publicly declared the power of aſtringents in expelling a calculus. As diuretics act not by diſſolving the blood, but by their local or ſympathetic ſtimulus under ſome circumſtances, I ſee no reaſon why aſtringents may not become diuretics in relaxed and torpid habits—many of the operations of the animal œconomy may be

be produced by relieving the parts from any defect they may labour under, which defect may retard, or prohibit their action.

Palſy of the kidneys will hinder a ſecretion of urine; torpidity in thoſe parts of the ſyſtem, or relaxation, will proportionally weaken their power, which being removed, they will be enabled to act; and certainly aſtringents bid fair to produce the deſired effect. However, in order to be acquainted with their utility, we muſt now inquire what are the general effects produced on the ſyſtem by their application;—where there is a ſuperabundant quantity of ſerous fluids in the blood, and the abſorbents appear to be in too inactive a ſtate, they become beneficial, by removing the former, and increaſing the abſorbent power of the lymphatic ſyſtem—hence drawing off water accumulated and ſtagnating in any of the cavities of the body. In ſcorbutic habits, they remove morbid acrimony from the blood, by carrying off the ſaline and putreſcent particles of the maſs of blood, which are generally diſſolved in the ſerous part of that fluid—and when there is a ſuperabundance of circulating liquids too great for the ſtate of the ſyſtem, by diminiſhing them they become ſerviceable—hence we find, their chief action is to promote evacuation.

When the natural ſecretion of urine is morbidly defective, they reſtore that ſecretion, by ſoliciting a flow of fluids to the kidneys, and hence diminiſh other ſecretions when morbidly augmented: and hence remove obſtructions in the canals of the urinary paſſages, and from them waſh out all acrimony.

But,

But, in order to promote their operation, they ſhould be given in the moſt dilute ſtate; we might ſay, it is always proper to throw in with them much aqueous fluid, except in caſes of dropſy; and, even in this caſe, there have been cures performed by drinking large quantities of mineral and common water. But where the intention of any medicine is to paſs off by urine, the patient ſhould walk gently in a cool air, and avoid all ſituations calculated to produce a determination of fluids to the ſkin; for there is ſo intimate a connexion between the kidneys and the ſkin, that diuretic medicines, when thrown into the habit, will often prove ſtrong promoters of inſenſible perſpiration.

According to the particular nature of the ſeparate action of diuretics, we ſhall be enabled to judge where they are improper.

Should there be too high a degree of ſenſibility in the kidneys, a conſiderable increaſe of urine, or any fixed obſtructions in the urinary paſſages, the adminiſtration of thoſe which are *ſtimulant* muſt be diſadvantageous.

If there ſhould be a deficiency of ſerous fluids in the ſyſtem, the above alſo are improper, and thoſe of the *cooling claſs*—but where there is a redundancy of ſeroſity, the prohibition of *diluent diuretics* are fairly pointed out.

Though we know not of any of this claſs that will always infallibly exert its diuretic power, ſtill the catalogue given us by a variety of authors is extenſively prolix;—we ſhall ſelect ſuch as are conſidered the moſt efficacious according to the particular ſtates of the conſtitu-

conſtitutions which may require them;—and theſe we ſhall compriſe under three heads—of *ſtimulant*—*cooling*—and *diluent*.

Of the FIRST CLASS, or STIMULANTS, are

Naſturtium
Horſe-radiſh
Aſparagus
Turnip
Radiſh
Fennel-ſeed
Leek
Onion
Celery
Parſley-ſeed.
All theſe may be taken as food, in decoction or infuſion.

Garlic,
Balſam of Copaiva, } See Expectorants.

Hedge Hyſſop,
Wake Robin, } See Stimulants.

JUNIPER BERRIES, { 1 or 2 ounces in a pint of water, boiled or infuſed.
Spirits of, from ½ an ounce to 1 ounce.
Oil, from 2 to 8 or 10 drops.

TURPENTINE—
Ætherial oil of, from 10 to 50 drops.
AMBER---Oil of, from 5 to 20 drops.
BALSAM OF CANADA— from 10 to 20 drops.
CANTHARIDES--- ¼ of a grain to 2 grains.
Tincture of, 10 to 40 drops or more.
SASSAFRAS SHAVINGS--- 2 ounces in a pint of water.
Oil, from 2 to 10 drops.
QUASSIA WOOD---
Powder, 10 to 20 grains.
Infuſion, { 1 or 2 drams to a pint of water, 2 ounces the doſe.

BROOM

Broom---Infuſion, Decoction,	½ an ounce to a pint of water---doſe 1 ounce.
Extract,	½ a dram to a dram.
Grass and Roots---	4 ounces to a quart boiled to a pint.
Wild Vine---Powder	15 to 30 grains.
Decoction,	4 drams to 1 pint boiled down from 1½ pint---doſe 2 ounces.
Tobacco---	See Sedatives.
Squills---Powder,	from 1 to 6 grains.
Freſh Root,	5 to 20 grains.
Pill,	8 grains to 15.
Meadow Saffron---	
Oxymel,	from ½ a dram to a dram.
Fox-Glove---Powder,	½ a grain to 2 grains.
Infuſion,	1 dram to ½ a pint of boiling water, ½ an ounce to an ounce the doſe.
Bath Waters, Harrowgate Waters,	Stimulant and diluent.

The COOLING CLASS are,

Nitre---	from 5 to 30 grains.
Æthereal, or ſweet ſpirit of,	from 10 to 30 drops.
Amber---Salt,	from 5 to 15 grains.
Diuretic Salt---	6 or 8 to 30 grains.
Fixed Sal Ammoniac---	15 to 30 grains.
Cream of Tartar---	½ a dram to a dram.
Acids---Fermented, Native,	1 dram to ½ an ounce.
Mineral Acids---	3 drops to 6.

The

The following, of this claſs, we conſider as acting on the principle of neutral ſalts, from the union with the acids they meet with in the ſtomach and inteſtines:

TESTACEOUS ANIMALS---

Crabs,
Lobſters,
Cockles,
Muſſels,
Oyſters,
Scollop,
Periwinkle,
} Theſe are taken by way of food.

SOAP--- 1 ſcruple to ½ an ounce.

KALI, or vegetable Alkali, from 5 to 30 grains.

ABSORBENT EARTHS---

Crabs Claws,
Eyes,
Hartſhorn prepared,
Chalk,
} from 10 to 30 grains.

LIME WATER--- 2 to 4 ounces.

The diluent are---which alſo may be eſteemed cooling---all the ſweet aceſcent fruits:

Dandelion	Potatoes
Endive	Boiled Onion
Lettuce	Water
Corn Sallad	Milk Whey.
Artichoke	

MALVERN
CHELTENHAM } WATER,
ACIDULATED WATERS,

§ 10. DIAPHORETICS, derived from the Greek *diaphoreo*, transfero, to carry through, include all

ſuch ſubſtances as increaſe perſpiration, or ſweat. This claſs uſed to be divided from ſudorifics, or ſuch medicines as promoted ſenſible perſpiration, but unneceſſarily; for they ſeem only to differ in their degrees of action, promoting the ſame effect, more or leſs copiouſly or perceptibly. But as different purpoſes may be anſwered by the different degrees of action of thoſe parts which produce theſe effects, it may be neceſſary to make ſome ſpecification reſpecting the two.

Inſenſible perſpiration is promoted by all ſuch materials as produce an aſtringent effect upon, or contract the ſolids in a moderate degree, by occaſioning an increaſe of elaſticity or ſpringineſs of the veſſels, and thus promote the circulation—hence Peruvian bark—all the aſtringent roots—auſtere wines—come under this diviſion, as do exerciſe which is moderate, either walking, riding on horſeback, or in a carriage—mild ſtimulants, or thoſe of the ſtronger claſs weakened.

Or, by ſuch things as determine the matter of perſpiration to the ſkin, ſuch as moderately warm air, temperate exerciſe, an equal circulation of the fluids when the body is at reſt, as well as in motion.

Or, occaſion ſuch a temperature of the ſkin, that it ſhall neither be too relaxed nor more rigid than requiſite—hence frictions, lotions, and deterſion are recommended;—and it is from producing this effect that theſe things are found ſo beneficial to the ſtudious, inactive, and thoſe who are advanced in life—unloading the ſyſtem by thoſe means, without weakening it in the ſmalleſt degree, but, on the contrary, increaſing its power.

Now

Now SWEATING is promoted by nearly the ſame means, for all ſuch things as relax the veſſels, and determine powerfully to the ſkin, will produce this effect, whether internally or externally applied.

Hence come under this claſs all thoſe diuretics which act not upon the kidneys electively—warm water, or barley-water ſweetened with honey, excite a copious ſweat—a glaſs of cold water drank going to bed—alſo thoſe things which take off ſpaſm, whether they are demulcent, or moderate or correct acrimony, as opium—teſtaceous powders. All ſtrong frictions, warm vapor, particularly of water, warm bathing, or whatever will render the ſkin relaxed or ſoft.

Nitre, and its preparations, and all thoſe ſubſtances which diſpoſe the veſſels to act upon their contained fluids—thus vinegar ſweetened with honey, and diluted with water, is the beſt ſudorific in acute caſes, and was a favourite remedy preſcribed by HIPPOCRATES, in the following form, called HYDROMEL, from *udor*, water, and *mel*, honey:

Take of Vinegar, } each one ounce.
Honey, }

Mace, a ſmall portion, to give it an agreeable flavour.

Water, twelve or fourteen ounces; let this be drank in bed after the manner of tea or coffee; and the patient there wait the reſult.

Care though ſhould be taken, that honey does not diſagree with the conſtitution; for, where there is any natural antipathy, it is apt to produce violent affections on the ſtomach and bowels; ſugar ſhould there-

fore, in theſe caſes, ſupply its place, or treacle will have a better effect. Whatever is taken hot, as well as heating aromatics, opiates, as alſo violent motion, are highly ſudorific.

Beſides, ſuch things as diminiſh the external preſſure of the air, and thoſe which increaſe the ſtrength of the heart, with reſpect to its number and force of pulſations, come under the head of ſudorifics—ſuch as Rheniſh wine, freſh juice of citron, penetrating aromatics, volatile ſalts, &c.—thoſe things which ſtimulate externally, as all acrid matters applied to the ſkin, as vinegar and ginger, which is the moſt ſubtile and penetrating, and much recommended by HELMONT—and, laſtly, whatever reſtores impeded motion in the internal parts, as paſſions and affections of the mind reproduce retarded perſpiration.

Though a number of the medicines mentioned above are ſtiled diaphoretics; ſtill, ſtrictly ſpeaking, and conſidering them as ſuch, independent of their connexion with ſudorifics, we have no one of which we can ſpeak with any certainty that has been tried by ſtatical experiment, the only mode we have of diſcovering them, except ASA FOETIDA, as handed down tous by SANCTORIUS—yet I ſhould ſuppoſe, that the power of all ſudorifics weakened might be juſtly conſidered as diaphoretics; for we find all thoſe things which can increaſe the circulation, determine the fluids externally to the ſkin, and take off ſpaſm from the minute veſſels, are certainly entitled to the character of diaphoretics and ſudorifics; and theſe three particular circumſtances ſhould be adverted to, when we want to promote a diſcharge of

this ſort for any good purpoſe; for though ſtimulants and ſedatives, or medicines poſſeſſing both theſe powers, may in many caſes be very proper, they may in ſome, conjunctively or ſeparately conſidered, be detrimental—and indeed there may be complaints where ſweating would be improper, though the promotion of gentle perſpiration might be uſeful, as in the ſcurvy—but in the venereal diſeaſe, if the effect could be produced with eaſe, ſweating is the beſt method of cure, and preferable to either evacuation by ſtool, or ſalivation.

From what has been advanced, we ſhall find that all general ſtimulants of the ſyſtem, as motion and heat, are powerful powerful ſudorifics;—particular ones are either applied to the excretories, thoſe pores from whence the ſweat iſſues, or to the parts conſenting with them, as the ſtomach and inteſtines; hence their action is either general, local, or ſympathetic.

The catalogue of DIAPHORETICS contains

BURDOCK—Decoction, { 2 ounces in 3 pints boiled to 2, taken every 24 hours.

Powder, 1 dram.

SENEKA, or RATTLESNAKE-ROOT—

Powder, Doſe from 20 to 60 grains.

Decoction, { 2 ounces in 2 pints of water to 20—doſe, 1 to 2 ounces.

SNAKE ROOT---Tincture, from 1 to 2 drams.

Powder, 10 grains to ½ a dram.

GUAIACUM WOOD---

Decoction, { 2 ounces to 3 pints boiled to 2---doſe 4 ounces.

Gum, See Cathartics.

Tincture, from 1 to 2 drams.

CONTRAYERVA---

Powder, from 10 to 30 grains.

Compound, from ½ a dram to 2 drams.

SARSAPARILLA---

Decoction, { 2 ounces to 4 in 3 pints of water boiled to 2, from 4 to 8 ounces the doſe.

MEZEREON, or SPURGE OLIVE---

The bark of the root, { ½ an ounce in 6 pints of water boiled to 4---doſe ½ a pint.

OPIUM--- See Sedatives.

CAMPHOR,
MUSK,
SALT OF HARTSHORN,
ASA FOETIDA, } See Antiſpaſmodics.

ANTIMONY---Lævigated, doſe from 20 to 60 grains.

Calcined, 10 to 30 grains.

Tartarized, ⅛ to ½ a grain.

Glaſs of cerated, 2 to 20 grains.

Precipitated ſulphur of, 3 to 6 grains.

ANTIMONIAL POWDER--- 2 to 6.

Wine, 10 drops to 50.

ANTIMONY---Tartarized wine of, } 20 drops to 40.

IPECACUANHA--- ¼ to 3 grains.

Wine, 30 to 40 drops.

WATER

WATER---

WINE---

VEGETABLE and NATIVE ACIDS---

ACETATED AMMONIA, called Myndererus's Spirit, } from 2 to 6 drams.

WATER OF AMMONIA, doſe 10 to 30 drops.

PREPARED AMMONIA, 5 to 10 grains.

Eſſential and Empyreumatic Oils---though they are ſeldom uſed in this view, but more as cordials and antiſpaſmodics.

From conſidering the operation of medicines of this claſs, we ſhall find that their utility is derived from diverting the determination of the fluids, and preventing them from crowding the internal viſcera—removing various cauſes, which obſtruct or impede the natural ſtate of the circulation on the ſurface of the body, and there reſtoring the natural diſcharge---and alſo from their evacuating power, leſſening the quantity of the circulating fluids, when too great for the powers of the ſyſtem—reſtoring lymphatic abſorption —and diſcharging any morbid accumulation of ſerum.

But ſhould the ſyſtem be uncommonly relaxed, a great increaſe in the determination of fluids to the exterior ſurface of the machine---a great want of fluids--- or the force of the blood on the baſis of the brain much debilitated, the prohibition of their uſe is obvious.

The laſt of which we have to treat in this ſection are

§ 11. EMMENAGOGUES, from the Greek words *emmena*, menſes, and *ago*, duco, to produce the menſtrual evacuations of women; and all ſuch medicines

as have been ſuppoſed to produce this effect are comprehended under this title.

A great deal has been written, and much time waſted, by authors, in endeavouring to account for the preciſe manner in which nature performs this operation in the female machine: the only preſent ſatisfactory concluſion we have on this head is, that a fullneſs of the uterine ſyſtem, from a peculiar determination of the blood to that organ, a permeability in the uterine and vaginal veſſels, and an increaſed impulſive power, all periodically exerted, are neceſſary for the ſalutary promotion of that diſcharge---and when there ariſes a deficiency in all or any of theſe particulars, obſtructions will take place, which requires the acid of that claſs of medicines of which we are now to treat;---but as there are various purpoſes often to be anſwered, e'er we can promote the deſired end, different medicines have been pointed out, and formed into diviſions according to their action.

Hence have we EMMENAGOGUES,

Stimulating---as

Antimony, — Quickſilver.

Irritating---

Aloes, — Sabine, — Cantharides.

Tonic and *Aſtringent*---

Iron, — Cold-bathing, — Exerciſe.

Antiſpaſmodic---

Aſa fœtida, — Caſtor, — Bathing the feet, and a variety of others, poſſeſſing ſimilar powers to thoſe here ſpecified.

But

But in the application of theſe medicines, one thing is to be particularly obſerved, that not any of them ought to be uſed *at all times*, that is, previous to, and when the menſtruating period is at hand, except the aſtringent claſs and quickſilver.

The irritating and antiſpaſmodic are only to be called in aid, when there is an aggravation of the ſymptoms, and an effort of nature at her accuſtomed time. The reaſon of which is clear---becauſe the former are conſidered only as preparatory, that by their operation the conſtitution may be put into ſuch a ſtate, as to be enabled to feel, and anſwer to the effects produced by the more powerful and forcible action of ſuch medicines as add vigour to the circulatory veſſels, puſh forward the blood quickly and rapidly, and take off any obſtructions which may be cauſed by ſome ſpaſmodic affections.

According, then, to the difference of the conſtitution we wiſh to relieve, ſo muſt we make our ſelection.

If it ſhould be neceſſary *to give ſtrength and firmneſs to the ſyſtem*,

Aſtringents may be had recourſe to—as iron, and its preparations—bark—and bitters.

If to increaſe the force in the moving powers in general,

Cold bathing and quickſilver.

If to produce partial action by the ſame mode,

Local Stimulants---

Partial warm baths—fomentations—ſtimulant vapor, or fumigation of tobacco to the uterus—aloetic medicines—fœtid gums—cantharides—acrid purgatives—

as

as they may communicate their ſtimulus to the part, either immediately, or communicate motion to the vaſcular ſyſtem from the exertion of their action on the contiguous parts.

If to take off conſtriction,

Antiſpaſmodics---

Aſa fœtida—caſtor---but particularly muſk.

There is another claſs which we muſt have recourſe to, particularly where there appears to be a ſcarcity of the ſanguinary maſs, in order, as far as in our power, to increaſe the general volume of fluids, that the peculiar determination may with more eaſe be brought about, and this is the claſs of NUTRIENTS, ſelecting ſuch to which the digeſtive powers of the conſtitution appears adequate to aſſimilate.

If now we call to our recollection what has been delivered---the means by which theſe appropriate remedies are rendered ſerviceable, will be—from promoting freely the circulation of the blood in the neighbourhood of the uterus, when too much obſtructed there---from increaſing the accumulation in the uterine veſſels themſelves, which is neceſſary to the menſtrual diſcharge—and removing morbid obſtructions to the paſſage of blood into the cavity of the uterus---alſo, from augmenting the ſtrength of the ſyſtem in general, particularly of the veſſels of the uterus, when defective ---and removing any ſpaſmodic conſtriction taken place in them.

But ſtrong objections may often ariſe to the uſe of ſome this claſs---if the rectum ſhould be in a particular irritable ſtate---or there ſhould be any local inflammatory affection,

affection, we muſt avoid thoſe which are irritating.--- If the blood circulates with great force, or there ſhould be particular debility of any other parts, the *ſtimulant* muſt be avoided; nor muſt thoſe denominated *tonic* be meddled withal, if there ſhould be any morbid rigidity in the ſyſtem.

Our catalogue of EMMENAGOGUES ſupplies the following articles:

PENNYROYAL, RUE, SABINE, ASA FOETIDA, GALBANUM, AMMONIACUM,	See Antiſpaſmodics.
MYRRH---	See Expectorants.
Tincture,	½ a dram to 2 drams.
QUICKSILVER,	See Sialagogues.
IRON---Ruſt prepared,	from 5 to 30 grains.
Tincture of muriated Iron,	from 10 to 60 drops.
Wine of,	1 dram to ½ an ounce.
AMMONIACAL IRON---	doſe from 3 to 15 grains.
TARTARIZED IRON---	10 to 30 grains.
VITRIOLATED IRON---	doſe 3 grains to 20.

Cathartics---Diuretics---and Emetics---may, if we conſider the nature of their actions, be fairly included, on particular occaſions, in the liſt of Emmenagogues.

CHAP.

CHAP. III.

WE are arrived at the third part of our Arrangement, and muſt proceed now to treat on MEDICINES WHICH ACT UPON THE FLUIDS THROUGH THE SYSTEM, in the ſame manner as we have before ſpoken on thoſe which acted upon the ſolids; and theſe include ATTENUANTS---INSPISSANTS---and DEMULCENTS---And, firſt, of

§ 1. ATTENUANTS, from the Latin *attenuo*, to make thin, perfectly expreſſes the nature of all the medicines of this claſs, and comprehends whatever can be underſtood by *diluting*, *inciding*, and *reſolving* medicaments; three terms into which this claſs have been, by many, divided, becauſe they all contribute to render the fluids more thin and fluxile.

But as this point may be accompliſhed in two ways, either by ſubſtances mixing with a fluid, and rendering it more thin, but not changing or altering the particles of which it was compoſed; or having the power of diminiſhing the coheſion of the blood, and thus rendering its texture leſs firm and tenacious; they may be certainly, and ought to be divided, according to their action, into *diluent* and *reſolvent*.

Among the firſt we cannot be properly ſaid to have any other than water, which is productive of a variety of good effects upon the habit---but not merely by its diluting property, it acts more particularly, immediately,

ately, and univerſally, by its coldneſs. Now, as a diluent, it not only thins the fluids in the way we have above ſpecified, but it aſſiſts digeſtion, (154) quenches thirſt—is an univerſal vehicle for ſolid food, corrects acrimony—promotes fluid ſecretions—and is by many eſteemed, much more than any other medicine, an univerſal remedy.

Now, as it is clear that all diluents ſhould be more fluid than the humours which are by their intervention to be rendered thinner; and have at the ſame time, when mixed, the property of making them retain their acquired fluidity—we ſhall find, there is not any thing except water that poſſeſſes this power.

Though wine—oil—ſaline ſubſtances—fermented ſpirits—and ſome earthy ſubſtances have been ſaid to enjoy theſe virtues, ſtill it is obvious, that they are defective, and have not them in that degree ſo as to become really diluent—for wine, as a diluter, depends upon its watery particles joined with its ſtimulating power—oil renders the maſs of fluids rather more viſcid—ſaline ſubſtances reſolve by their ſtimulus—fermented ſpirits are more apt to coagulate—earths are of themſelves ſolid and inert, and can never be taken in this view, but as they may mix with ſome acidities in the ſtomach and inteſtines, and thus change their form, and become active from their aſſuming that of neutral ſalts, and with them may they be claſſed; therefore it is to water we muſt reſort, when we wiſh to call in aid alone a purely diluting power—to which, it has been ſaid, if we add gentle heat, or ſaline particles, as ſea ſalt, Polychreſt ſalt, ſal ammoniac, or borax, we

ſhall

ſhall improve its power, by the addition of their ſtimulating effects, but this is adding a reſolvent property —Moderate motion is alſo ſaid to improve its powers.

But as for reſolvents, they act by increaſing the force of the moving powers by the ſtimulus they poſſeſs in a limited degree; for ſhould they act violently, they would, by diſſipating the thinner part of the fluids, render them thicker, and become incraſſants; but by gently ſtimulating, though they produce evacuation, they permit the veſſels to act more freely upon their contained fluids, and hence become reſolvent.

On conſidering the action of this claſs, we ſhall be empowered to diſcover, that their beneficial effects ariſe, from removing any morbid viſcidity in the blood, and reſtoring a free circulation, when in the ſmall veſſels it is morbidly obſtructed—from increaſing the quantity of ſerous evacuations, when too greatly diminiſhed—and rendering them, when too thick and viſcid, more fluid.

But their uſe muſt be prohibited in conſtitutions labouring under too great thinneſs of the general maſs of fluids—having a propenſity to morbid ſerous accumulations—or a remarkable increaſe of ſimilar ſecretions.

The catalogue of ATTENUANTS are,

WATER,
MILK WHEY,
ALL LIQUIDS abounding with water,

CUCUMBERS,
MELONS,
BETE,
WHITE LILY ROOT,
CELERY,
ASPARAGUS,

SPI-

SPINAGE,	ARTICHOKE,
BOILED ONIONS,	MUSHROOM,
CORN SALAD,	ENGLISH MERCURY,
CABBAGE,	And ſome others. All the
DANDELION,	SWEET ACID FRUITS.
ENDIVE,	

ALKALI—

Fixed vegetable,
Fixed foſſile,
Volatile,
} in ſmall doſes, and continued for ſome time.

NEUTRAL SALTS— { See Diuretics and Cathartics.

SOAP--- See Diuretics.

§ 2. INSPISSANTS---theſe are alſo called INCRASSANTS---from the Latin words *inſpiſſo* and *incraſſo*, to thicken. Theſe terms, like the former, give us a perfect idea of their import---from whence we underſtand all ſuch ſubſtances as give a degree of viſcidity to the circulating fluids.

From experience we know that our fluids do ſometimes run into a ſtate of morbid thinneſs; but by what means, is very doubtful.

Some have ſuppoſed it to ariſe from too great a proportion of fluid aliment; whilſt others have been led to believe, it originated from a retention of ſome of the ſerous ſecretions. But if we reflect, that children and many adults live upon food totally liquid almoſt, yet no ſuch appearance is the reſult; and that nature always ſupplies the defect of one ſecretion by the increaſe of ſome other, and the retention muſt be partial, it cannot be univerſal; both theſe opinions ſeem by no means ſatisfactory.

I rather

I rather think that it is occaſioned by a relaxation of the ſyſtem, particularly of ſome, or the whole of the digeſtive organs; for ſtrong, muſcular, laborious ruſtics, whoſe digeſtive powers are good, have generally, nay, I believe always, the blood tending to the oppoſite extreme---whilſt the more delicate and relaxed, whoſe digeſtive powers are weak, have the ſanguinary maſs too fluid: indeed people whoſe blood has poſſeſſed a proper texture, have, from illneſs, had it reduced to a ſtate manifeſting a too weak coheſion, and that apparently by the ſyſtem being debilitated.

Whatever may be the cauſe, it is our buſineſs to remedy the effects; and theſe we attempt by reproducing a proper proportion of viſcid fluids, and by increaſing their attractive power one with another; and their conſequences may, we think, be acquired by the following catalogue of INSPISSANTS:

WINE,
ACIDS vegetable
------ mineral,
ALCHOHOL,
RADISH,
TURNIP,
CARROT,
PARSNIP,
SKIRRET,
POTATOES,
LEEKS,
COMFREY ROOT,
CUCUMBER,
POPPY, and
MELON Seed,
ONIONS,
FARINACEOUS GRAIN,
MUCILAGINOUS and OILY Subſtances,
SAGO,
SALEP,
ALMONDS, &c.
GUM ARABIC,
----- TRAGACANTH,
STARCH,
ISINGLASS,
ARROW ROOT,
ANIMAL FOOD,
FISH,
EGGS,
ALL THE ASTRINGENTS,
BARK.

It has been remarked by ſome authors, that acids---wine---alchohol---and in ſome meaſure, the aſtringents uſed internally, have been ſaid not to produce their inſpiſſating effect; and ſhould therefore only be employed externally, in caſes of profuſe bleedings; and that the nutritious and demulcent claſs, of which we ſhall next treat, muſt, for reſtoring the viſcid fluids, be depended upon.

However, I cannot avoid thinking the whole, alchohol excepted, may be uſed with much advantage; and greatly aſſiſtant in rendering thoſe, which act merely on the blood, more quickly efficacious, by invigorating the ſyſtem, increaſing the ſtrength of its vaſcular power, and conſequently the action of the veſſels upon the contained fluids.

On this head authors have confined themſelves to ſuch ſubſtances as were either *farinaceous*, as barley, wheat, rye, and ſuch---or *mucilaginous*, as marſh-mallows, gum arabic, iſinglaſs, &c. and conceived their utility to be derived from removing morbid tenuity in the blood---preventing the tranſmiſſion of red blood through veſſels not naturally fitted to receive it---diminiſhing the quantity of thoſe ſecretions which were ſerous, and too copious, and rendering them more viſcid where morbidly thin and fluid---and have prohibited their uſe in morbid viſcidity of the blood---preternatural diminution of the ſecretions in general---and a high degree of debility of the digeſtive organs.

I am perſuaded that in many caſes, particularly in thoſe where a weak digeſtion is prevalent, the uſe of ſome of the ſtimulant aromatics, mixed with the in-

vigorating aſtringents, ſuch as bitters---bark---iron, would greatly conduce to conquer many of thoſe defects for which incraſſants are preſcribed, and I have repeatedly ſeen their good effects---indeed I very often unite them, and find, that, conjoined, they prove more efficacious than when adminiſtered ſeparately.

§ 2. DEMULCENTS, from *demulceo*, to appeaſe or mollify. Theſe by ſome have been conſidered to act in a double capacity---by blunting or ſheathing the acrid particles of our morbid humours---or promoting an entire change in ſuch as were offenſive from their acrimony, and forming a third ſubſtance, perfectly different in its nature with reſpect to its action. Hence have they been ranked as general and particular demulcents. In the latter claſs are enumerated all the acids and alkalines, as well as ſome metals, with regard to their influence on each other---as if one was creative of any diſturbance in the habit, by exerting a morbid ſtimulus from its acrimony, the other on being given proved corrective, and cured the affection; hence was ſtiled demulcent; but theſe are more properly arranged under other heads, as the antalkaline and antacids, of which we ſhall ſoon treat in their ſeparate places.

At preſent we ſhall conſider them only as obtunders of, or blunting acrimony, by mixing with and preventing the acrid part of the fluids from exerting themſelves on the ſolids, ſo as to create pain, or other uneaſy ſenſations.

And it will appear then, that all of this claſs, in this view of the ſubject, are either mucilaginous---oily---or a compoſition of both; and theſe manifeſt their action immediately in the ſtomach or inteſtines; or, after having

having paſſed through the circulation, in the ſecretory organs.

For it is imagined, that acrimony takes not place in the blood veſſels, but in the ſecretions, as the ſerum is thought to be the vehicle of acid ſubſtances. Theſe demulcents, therefore, mixed with the blood are ſeparated with the ſerous, or thinner parts of the fluids, in thoſe places of the ſyſtem where ſecretions happen; and thus, by enveloping the irritating particles, prevent them from ſtimulating.

Thus they defend the kidneys, the lungs, the veſſels of the vagina and uterus, in nephritic or gravelly complaints; in defluxions on the lungs; and caſes of the whites: and are highly uſeful in hæmorrhages, which are often maintained by acrimony; for increaſed ſecretion of mucus is always acrid, till its thinner parts are diſſipated, by lying ſome time—hence their uſe in coughs, defluxions on the breaſt, the whites, and thoſe diſcharges after child-birth, called lochial.

Whatever good we may perceive can be derived from medicines of this nature, may be acquired from ſome of the following ſelection of DEMULCENTS:

LARGER COMFREY ROOT,
SEEDS OF CUCUMBER,
---------- POPPY,
---------- MELON,
SUGAR,
HONEY,
RAISINS,
DATES,
FIGS,
HIPS,
LIQUORICE,
GUM ARABIC,
------ TRAGACANTH,
STARCH,
ISINGLASS,
The NUTRIENTS,
----- EMOLLIENTS, and
----- SEDATIVES,

though theſe laſt can ſcarce be ſaid to act in the mode we have deſcribed of common demulcents; but rather take off the acrimony by diminiſhing the ſenſibility of parts; and produce a viſcoſity of the ſecreted fluids, it is obvious from the appearance of the matter, in thoſe who have taken opiates, after their narcotic effects have ceaſed.

And this I take to be owing to the veſſels being by their power thrown into a ſtate of torpor, and thus ſuffering the ſecreted fluid to become more denſe by its continuance, and conſequently leſs acrimonious from the diſſipation of its more ſerous parts.

They have been divided into LENIENT DEMULCENTS, ſuch as Starch—Gum Arabic—Olive Oil—and thoſe which are DILUENT, as Water, and watery ſubſtances; but theſe laſt come not properly under this head, without being mixed with ſome of the former; as they are apt, without ſuch mixture, to paſs off too quickly by ſome of the emunctories.

The uſe to be acquired from the adminiſtration of theſe materials are, a diminution of the action of the ordinary ſtimuli upon parts affected with too great ſenſibility, and a ſupply of the natural coverings of the parts where too defective—diminiſhing morbid acrimony in the ſyſtem in general—and rendering more mild thoſe ſecretions which are præternaturally, or too violently acrid.

But their adminiſtration would be pernicious, if there was any defect of a natural pungency in the ſecreted fluids—a great degree of viſcidity in the coverings of the ſenſible parts—or an uncommon want of enſibility in the excretory organs.

CHAP. IV.

WE are now come to our fourth diviſion, wherein we purpoſe to conſider

MEDICINES WHICH MANIFEST THEIR SENSIBLE ACTION CHIEFLY, IF NOT SOLELY, IN THE FIRST PASSAGES RESPECTING THE FLUIDS.

The firſt of which preſent themſelves to our view are,

§ 1. ANTALKALINES, from the Greek words *anti*, againſt, and *alkali*, alkalies, conſequently all acids and aceſcent materials come under this deſcription; as do all ſuch medicines as conquer alkalies, and deſtroy their power of action as ſuch. But in this place the acids and aceſcents are only to be conſidered as correctors of alkaleſcent ſubſtances; for we have before ſeen the diverſified power they appear to maintain as *aſtringents---ſtimulants---ſedatives---inſpiſſants---carthartics---diuretics*---and they will alſo rank with *antiputreſcents*; at leaſt ſuch of them as have been ſelected and arranged agreeable to the effects they have been thought to produce on the human machine: and here their chief action appears to me to be in the firſt paſſages only, where, coming in contact with alkaleſcent ſubſtances, there they neutralize them.

I am of opinion, that where there happens to be, from any diſeaſe, an alkaleſcent ſtate of the fluids, they are not of much ſervice by acting in them merely againſt, and correcting ſuch alkaleſcency; for when

our fluids are affected to any conſiderable degree with this, little is in our power; but in caſes of this kind, ſhould they be of any ſervice, I am perſuaded it is more from their action communicated to the ſolids, particularly the mineral acids, than from any other cauſe. Perhaps the utility derived from the native acids depends more upon the fixed air, with which they are replete; for we have not a more powerful corrector of putreſcent acrimony than this ſpecies of air.

They have been divided into vegetable and ſaline antalkalines—but the better diviſion is, into NATIVE—of which ſorrel—barberry—and tamarinds form examples—and into artificial, as the acid of vitriol—ſea ſalt—nitre, and vegetable.

The catalogue of ANTALKALINES, with which we are ſupplied, are,

SWEET ACESCENT FRUITS.

Pears,
Apples,
Oranges,
Lemons,
Strawberry,
Raſpberry,
Barberry,
Tamarinds,
Currants,
Grapes,
Cherries,
Raiſins,
Dates,
Figs, &c.

MOST OF THE CULINARY PLANTS.

Cucumbers,
Melons,
Bete,
Spinage,
Corn Sallad,
Cabbage,
Naſturtium,
Endive,
Dandelion,
Lettuce,
Salary,

Salary,
Aſparagus,
Artichoke,
Radiſh,
Turnip,
Carrot,
Parſnip,
Skirret,
Potatoes,
Leek,
Onion,
Garlic.

OLIVE,
WATER DOCK,
SORREL, &c.
WINE,
VINEGAR, with the ARTIFICIAL MINERAL ACIDS above ſpecified,
SALT OF AMBER. See Diuretics.

And likewiſe the whole claſs of DEMULCENTS; but theſe act by mechanical, not chemical mixture—that is, from merely mixing with and ſheathing the offending particles, not from altering them, by forming a new combination, ſo that each body loſes totally its natural properties, and becomes a third, differing from both—and, perhaps, ſome others here ſpecified, may act in the ſame mechanical mode.

It will, from this conciſe view, appear obvious from whence the whole of the virtues of this claſs of medicines may be collected—and where their uſe ought to be prohibited—*their power* of neutralizing alkalies.

For, ON THE ONE HAND, by this power they are capable of removing any ſenſation of alcaleſcency in the firſt paſſages—reſtoring the natural diſpoſition to acidity in the ſtomach—and correcting in the alimentary canal præternatural putreſcency.—ON THE OTHER,

if there ſhould be, from an acid cauſe, any natural diſpoſition in the ſtomach to that painful ſenſation, called CARDIALGIA, an uncommonly ſlow and languid circulation, or any conſiderable diminution of animal heat, theſe defects they would increaſe; conſequently, under ſuch circumſtances, ought to be prohibited.

§ 2. ANTACIDA, Antacids, from *anti*, againſt, and *acida*, acids. Theſe comprehend all alcaleſcent ſubſtances, moſt of the abſorbent earths, and ſome neutral ſalts—and are ſuch ſubſtances as counteract acidity in the ſame manner as acids conquered alkalies—and are in this light here only to be conſidered, as we have before taken notice of them with reſpect to their different operations in the habit, ſelected agreeable to their various powers, acting as *ſtimulants*, *antiſpaſmodics*, *attenuants*, *antiſeptics*, *cathartics*, and *diuretics*—and in this place they ſeem chiefly to exert their efficacy only in the ſtomach, now and then, perhaps, in the inteſtines.

The catalogue of ANTACIDS with which we are preſented, ſufficient to anſwer any purpoſe they are capable of effecting, are,

TESTACEOUS ANIMALS.	See Diuretics.
ANIMAL FOOD---	
LIME WATER---	Doſe 6 ounces to 16 in a day.
CHALK---	prepared, from 10 grains to 2 drams.
CRABS EGGS and CLAWS	
BURNT HARTSHORN--- Decoction of,	
EGG and OYSTER SHELL prepared---	from 10 grains to 2 drams.

ALKALI

ALKALI---Vegetable, Foſſile, called Soda, or Natron,	from 5 to 30 or 40 grains.
Volatile,	from 3 to 20 grains.
BORAX---	from 4 to 10 or 12 grains.
TARTARIZED KALI, or SOLUBLE TARTAR---	12 to 20 or 30 grains.
SOAP---	See Diuretics.

STIMULANTS---

ANTISPASMODICS---

SEDATIVES---and

DEMULCENTS---

Though moſt of theſe act by coming in contact with the prevailing acid immediately, without conſidering the ſolids—yet thoſe under the general titles, except the demulcents, which become ſerviceable by their ſheathing property, produce their effects by the influence they have on the moving powers, which we have in their proper places before ſpecified.

As the action of theſe, like the former, is ſo very limited, only to be conſidered in this place as counteracting acidity in the firſt paſſages, we ſhall have occaſion to ſay little more than will be ſufficient to ſhew where they will be beneficial, or in what caſes their exhibition would be improper.

When there is a morbid prevalence and ſenſation of ſourneſs in the alimentary canal; when, from the ſame cauſe in the ſtomach, the natural appetite is vitiated, and the action of that organ and inteſtines is diſordered, they are of ſervice in removing the former, and reſtoring the two latter to their healthful ſtandard.

But

But when there is a prevalence of alcaleſcency in the ſtomach and bowels, or a tendency to putridity in the general maſs of blood, they muſt be highly detrimental. And, perhaps, in this laſt caſe, the miſchief which would ariſe from their uſe may be more owing to the deſtruction of the acid in the firſt paſſages, than from joining in their alcaleſcent ſtate with the fluids, as acids have been conſidered antiputreſcent.

§ 3. ANTISEPTICS, from *anti*, againſt, *ſeptica*, putrefacientia, ſubſtances occaſioning putrefaction. Theſe include all ſuch materials as obviate the too great putreſcency of our fluids.

Now as the putreſcency of our humours may be brought on by exceſs of heat and motion, as well as receiving any putrid ferment into the vaſcular ſyſtem—as it, when once fixed, and begun to exerciſe its deleterious action, induces languor and great debility in the moving powers, we may ſee the reaſon of our antiſeptic claſs of medicines, exhibiting, according to the conception we have of their action, ſuch apparently contradictory views—for in the ſame arrangement we ſhall find, that we have the *volatile ſalt*, and thoſe of the *neutral kind*—the former conſidered as highly heating, and a ſtrong ſtimulant of the moving powers—the other as cooling the ſyſtem, and mitigating vaſcular motion.

From thence I preſume, that they are only applicable in different ſtages of putreſcent action; or in different conſtitutions affected with putrefaction;—and not unlikely the ſame may hold good with acids and alkalies,

alkalies, for they are both enumerated under antiſeptics. Of theſe different ſubſtances it therefore behoves us to be very careful in the application.

In the firſt ſtages, *where a putrid tendency* may be accompanied *with high degrees of circulatory motion and heat*, or in conſtitutions where theſe are prevalent, neutral ſalines and aceſcents may be the moſt proper; but *in languid habits*, or thoſe made ſuch by the continuance of the enervating power of putrid particles, volatiles and cordials challenge the preference.

Nitre has been ſaid to be ſtrongly antiſeptic, when applied to inanimate animal matter, but not ſo in the living ſubject, as it leſſens the powers of the vital actions—but this is only applicable in the advanced ſtage of putreſcency; and it is to that ſtate of the diſeaſe alone they muſt mean to advert, who advance, that cordials, and whatever invigorates the ſolids, by increaſing the vital heat, are properly antiputreſcent, and by what alone relief can be obtained in putrid complaints.

However, our chief intent in theſe caſes is to keep up a due action of the moving powers, and a proper tone of the ſolids, that is, an active firmneſs---which effects, we conclude, may be produced by the ſubſequent ſelection of ANTISEPTICS:

Thoſe FRUITS which have ſweetneſs coupled with acidity,

CHERRIES, ORANGES,
APPLES, And ſuch like.

ACERB FRUITS,

Quinces, Sloes, &c.
Medlars,

WINE

WINE,
VINEGAR,
NITROUS, MURIATIC, VITRIOLIC } ACID, SALT OF AMBER, } See Diuretics.
Some NEUTRAL, METALLINE, and EARTHY } SALTS.
ESSENTIAL OILS,
EMPYREUMATIC OILS.

ACETATED LITHARGE--- from 1 to 3 drops.
ALUM--- Page 210.
NITRE--- ------272.

ALCHOHOL,
All VEGETALB NUTRIENTS,
ASTRINGENTS,
STIMULANTS,
SEDATIVES,
ANTISPASMODICS,
WORMWOOD,
CHAMOMILE,
QUASSIA,
OIL OF TURPENTINE,
ALE---PORTER---CYDER ---PERRY,
CAMPHOR,
ASA FOETIDA,
MUSK,
MYRRH,

but, in cases of languor, certainly the most eligible are,

WINE---
BARK---

Extract, Resin, } dose from 12 to ½ a dram.
Decoction, { 1 ounce to 2 pounds reduced to 1 pound--- dose 2 ounces.

BARK

BARK---

Powder,	20 grains to 2 drams.
Tincture, ſimple,	1 to 2 or 3 drams.
compound, or Huxham's,	1 to 2 or 3 drams.

They have been properly divided into ſuch as are *tonic, increaſing the activity and ſtrength of the ſyſtem*, of which Peruvian Bark---Wormwood---and Chamomile are examples.

Such as are *cooling*---Acid Salines---Neutral Salts.

Stimulant, as Wine---Alchohol---Oil of Turpentine.

Antiſpaſmodic, as Camphor---Aſa fœtida---Muſk.

The utility of theſe are derived from reſiſting and correcting putrefaction---by preventing the aſſimilating quality of any putrid ferment received into the machine---correcting the putrid diſpoſition of the humours---obviating the progreſſion of putreſcency taking place in the ſolids---and reſtoring to a ſound ſtate ſolids morbidly putrid.

But in caſes where a peculiar ſenſibility of the ſtomach is prevalent, thoſe called TONIC are to be avoided—the REFRIGERANT, where a debility of the vital powers are manifeſt—the STIMULANT, when we perceive too great a degree of irritability, circulation too highly accelerated, or ſtrong diſpoſition to profuſe bleeding—and the SEDATIVE ANTISPASMODICS, when there is a too languid circulation, a lethargic diſpoſition, or a conſiderable degree of torpor in the ſyſtem.

CHAP.

CHAP. V.

IN our fifth and laſt diviſion we include MEDICINES WHICH PRODUCE THEIR CONSEQUENCES BY EXTERNAL APPLICATION;---OR ON SUBSTANCES FORMED WITHIN THE MACHINE, THOUGH LODGED WITHOUT THE VERGE OF CIRCULATION. The firſt of which we ſhall conſider are,

§ 1. EPISPASTICS, or VESICATORIES, from *ἐπίσπαω*, to draw, and *veſicatorium*, as raiſing a bliſter. They are therefore ſtimulants, in the firſt ſenſe, locally ſuch; and, if continued, become evacuants.

But their action is not confined to thoſe places where they immediately act; they communicate that action to the ſyſtem in general, and often in particular to the urinary paſſages; but this effect is chiefly produced by cantharides, or Spaniſh flies.

They have been formed into three diviſions, viz.

1. Such as only occaſion heat in the part—of which claſs may be conſidered the ſlighter ſtimulants.

2. Such which create heat, with ſome degree of inflammation, as Horſe-radiſh—Muſtard—Volatile alkali.

3. Thoſe which raiſe bliſters, as Cantharides, Euphorbium;—to which may be added a fourth.

4. Thoſe which produce a diſcharge of pus, as Setons and Iſſues.

They are often applied with different intents, either as they act on the nervous power, alter the balance of circulation,

circulation, or produce evacuation; hence are their particular uſes diſcoverable;---in removing torpidity, or languor in the ſyſtem---conquering the effects of more than uſual ſenſibility---decreaſing violent pain---weakening the circulatory force of the blood againſt any part morbidly affected---and alſo of action in veſſels of the neighbourhood of thoſe to which they are applied. They alſo decreaſe the volume of the circulating fluids when too great in the habit, and evacuate morbid accumulation of ſerum.

But ſhould the ſyſtem be in general highly irritable, the blood præternaturally thick, or the fluids in general too defective in quantity, theſe circumſtances demand the prohibition of their uſe.

§ 2. PHLEBOTOMIA, bleeding, from *phleps*, vena, a vein or artery, and *temno*, ſeco, to cut.

Under this term are arranged all thoſe modes by which blood is evacuated from the machine by the medical art; and theſe operations are conſidered as either producing general or partial effects, by relieving the ſyſtem in general, or only in ſome of its parts.

The diviſion of this claſs has commonly been general, and topical or local; and inſtanced, in opening a vein, or an artery, as belonging to the firſt; as to the ſecond, ſcarifications, or cupping-glaſſes, which are called *cruentæ*, from the drawing blood---and the application of leeches; but the terms, it has been thought, would be more judiciouſly confined to the quantity taken, as veins or arteries muſt in all caſes of blood-letting be opened. *In general bleeding* we commonly take away ſuch a quantity as will in ſome degree decreaſe

creaſe the power of the ſyſtem---*in local*, ſuch a proportion only as may contribute to relieve a part of the ſyſtem near which the operation is performed---or, we ought to make ſuch diſtinctions, for the ſake of propriety, by which we ſhould underſtand, that in general bleeding, the larger branches of the veins or arteries are opened—in local, only the capillary, or very ſmall branches.

From whence the uſe accruing from this operation is derived may be eaſily conceived—as it proceeds either from leſſening the quantity of blood—altering the ſtate of its motion—or changing its courſe.

Hence it relieves in all caſes where the maſs of blood abounds too much in quantity; or, when there is a too great tenſion or diſtenſion of veſſels in the ſyſtem—when the force of the circulation is highly increaſed—or the heat immoderate—or when in particular blood-veſſels there is a morbid increaſe of action, or the force of the blood is too great againſt parts morbidly affected.

But where there is too great a ſcarcity of blood, the circulation remarkably weak or languid, or too great a debility in the voluntary motions—theſe are powerful objections to its uſe.

Though from this operation it is apparent that the higheſt advantages may accrue; and indeed, in many caſes which are inflammatory, or ariſe from ſanguinary congeſtion, nothing can be done efficaciouſly without it; ſtill I think it is made infinitely too free uſe of, eſpecially in thoſe places and climates where people are liable to fall into putrid, and ſome malignant complaints. Where

Where the patient is ſtrong and athletic, the pulſe full and tenſe, and there appear evident ſigns of too great plenitude, it is *univerſally* right to bleed, otherwiſe there is ſome caution required; for it very often hurries the habit into ſuch a ſtate of extreme debility, in ſome fevers, that nothing can compenſate the miſchief it occaſions.

In all doubtful caſes, therefore, where it may be thought neceſſary for blood to be taken away, I would adviſe the operator to lay his finger on the pulſe of the oppoſite wriſt to that wherein the operation is performed; if, during the flowing of the blood, the pulſe riſes, it is an indication to perſiſt; if it ſhould flag, we ſhould immediately deſiſt.

§ 3. ANTHELMINTICS, worm medicines, from *anti*, againſt, and *elmins*, vermis, a worm: or VERMIFUGES. Thus are called ſuch ſubſtances as deſtroy or expel worms, whether ſituated in the gullet, in the paſſages to the ſtomach, the ſtomach itſelf, or the inteſtines; but, though it has been ſaid, worms are formed in various parts of the machine, and have been found in different places, as the liver—kidneys—lungs—membrane ſurrounding looſely the heart—brain—cavities of the teeth, &c. we confine ourſelves to medicines which perform their office on thoſe which lodge in the firſt paſſages.

BOERHAAVE uſed to divide this claſs into two, viz. thoſe which deſtroy and thoſe which expel worms;—but there may be caſes where the exhibition of theſe may be improper, becauſe of the particular ſtate of the ſtomach and inteſtines being unable to bear their

action—hence modern authors have more judiciouſly divided them into four heads :

First. Thoſe which are ſuppoſed to deſtroy, by poiſoning the worms, termed *venenoſa*, poiſonous, as

Quicksilver---	See Sialagogues.
Tin—Powder,	doſe 6 to 20 grains or more.
Sulphur—Flowers of,	See Cathartics.

Second. Thoſe which expel worms, or *cathartics*,

Scammony—	See Cathartics.
Jalap—	
Aloes—	
Gamboge	

Third. Thoſe which have lubricating properties, called *lubricantia*, lubricating, as

Oil of Olives— Linseed Oil—

Fourth. Medicines ſuppoſed to have a tonic power, or giving activity and ſtrength to the bowels, named *tonica*, as

Sabine—	See Emmenagogues.
Worm Seed—Powder,	doſe ½ a dram to a dram.
Tanzey—Infuſion,	½ a pint to 1 pint in 24 hours.
Powder,	10 to 30 grains or more.

Beſides theſe there are a number of other articles exhibited for this purpoſe—

Indian Pink-Root—	
Powder,	8 to 40 grains.
Fern Root—Powder,	1 dram to 3.
Cowhage—	the hairy part ſcraped off the pods, and mixed with ſyrup, to the conſiſtence of an electuary—doſe, 1 to 2 tea ſpoonfuls.
Salt—	in ſtrong ſolution.

Camphor

CAMPHOR— See Antiſpaſmodics.
BITTERS—OIL IN GLYSTERS—
HARROWGATE WATERS—

But I believe Calomel in general one of our moſt ſuperior vermifuges.

The utility of theſe medicines naturally reſult from their action on the worms themſelves—alſo on the ſyſtem—by which means they either deſtroy, expel, and prevent their generation in the machine.

But ſome exceptions may very properly ariſe to the uſe of each under particular circumſtances---if the inteſtines ſhould be in an inflamed ſtate, or be abraded, the *venenoſa*, or poiſonous, ſhould be avoided---the *lubricantia*, lubricating, if there ſhould be accumulation of ſordes in the firſt paſſages---if a peculiar ſenſibility of the ſtomach, the *tonica*---and the *cathartic*, if any topical inflammatory affection ſhould occupy the inteſtines, or ſhould the conſtitution labour under any conſiderable deficiency of fluids.

§ 4. LITHONTRIPTICS, from *lithos*, lapis, a ſtone, and *thrupto*, frango, to break. By this term we ſhould mean all ſuch materials as diſſolve the ſtone;—but our catalogue, under that idea, would not, I fear, comprehend any, notwithſtanding the variety of pompous pretenſions ſome have publiſhed on the certain exiſtence of medicines endowed with this ſolvent property. But it is the general opinion of the candid and rational practitioners; that thoſe who write now on the powers of medicine, though they retain the term, only mean ſuch ſubſtances as poſſeſs a power of removing the diſpoſition in the body to the formation of calculi, or ſtony concretions.

Indeed, we have had much ſaid on the diſſolving power of alkalies and quick-lime—ſoap ley taken in broth freed from its fat—Mrs. Stevens's ſolvent, and lime water—for a long ſeries of time; ſtill few have found the wiſhed-for ſucceſs; but how far they may act as preventive remedies, as well as ſome others, cannot be poſſibly determined. From the uſe of bitters, and the uva urſi, or leaves of bear's wortle berry, in this view, I have known ſome benefit to ariſe in patients ſubject to gravelly complaints, from a collection of ſtony or gouty matter. Much is ſaid at preſent of, and indeed the many experiments lately made ſeem to prove the utility of a ſolution of the VEGETABLE ALKALI, called *kali*, impregnated with fixed air, half a dram of the ſalt given at each doſe, diſſolved in any proper liquid, twice a day, and this increaſed to two drams or more, and continued for ſome time.

They have, however, been divided into ſuch as are ANTACID, as

LIME WATER---	6 ounces to 16 in the day.
SOAP---	20 grains to ½ an ounce.
CAUSTIC ALKALI--- SOAP LEY---	in veal broth, 10 to 30 drops.
KALI with fixed Air,	in infuſion, 2 ounces to a quart of water---doſe 6 to 8 ounces.

Such as have an ASTRINGENT POWER, as

BITTERS---	
UVA URSI, or Bear's Wortle Berry,	See Aſtringents.

But it has been alledged, that all alkalies in general poſſeſs this ſtone-diſſolving power, therefore in their

their cauſtic ſtate they are by ſome rejected; becauſe they are apt to diſagree with the ſtomach, and from thence are they obliged to be employed in too ſmall doſes.

As ſolvents, I am of opinion, little can be ſaid of the uſe of the claſs here enumerated; but as preventives, having a power to obviate the generation of ſtony concretions in the machine, they may be conſidered to be beneficial in two ways—in altering the ſtate of the ſolids, by preventing a particular ſtate of laxity of the ſtomach, and in the kidney—and in producing ſuch an effect upon the circulating fluids, that they become leſs liable to furniſh ſtony materials to be ſecreted by the kidneys.

But certain objections will ariſe to the uſe of the *antacids*, if in the ſtomach there ſhould be a diſpoſition prevalent to generate alcaleſcency—to the *aſtringents*, if there ſhould be a rigidity, or contraction in the coats of that organ.

On *vermifuges* and *lithontriptics* we have been more conciſe than on other parts of our ſubject; becauſe they each are appropriated here only to the alleviation of ſingle complaints ſpecified under their reſpective heads; of which, when we come to treat hereafter, we ſhall be obliged to ſpeak more fully; and enlarge more on the particular nature of the remedies in each caſe adminiſtered: at preſent it has therefore been thought ſufficient to furniſh a general idea, in order to prepare our readers properly for more eaſily underſtanding what we have to deliver on theſe heads.

And now we muſt obſerve; that, notwithſtanding, in treating on medicines, we have enumerated a great variety, which many profeſſors have thought eſſentially neceſſary to be produced; there have not been wanting ſome in the medical world, who ſeem to deſpiſe all this labour, as well as the authority of *Hippocrates*, *Boerhaave*, and all the men of eminence, who have been conſidered as ſhining ornaments of their profeſſion; and publicly avow, that a very few medicines, properly applied, will ſerve every purpoſe of the medical art—and theſe are,

CANTHARIDES, uſed chiefly as bliſters,
CALOMEL,
TARTARIZED ANTIMONY,
ALOES,
SENNA,
JALAP,
SALTS,
OPIUM,
With the uſe of nutritious diet and domeſtic cordials.

However, we cannot avoid confeſſing, that we think this catalogue infinitely too conciſe; particularly as there are ſome medicines omitted which have ſurpriſing effects, for which we cannot ſo readily account; but whoſe efficacy has been confirmed to us by practice; and others of which, from daily experience, we are forbid to doubt the utility. I would, therefore, in order to render the catalogue more complete, ſubjoin the following articles:

OIL OF CASTOR,
ANIMAL OIL,
OIL OF AMBER,
ASA FOETIDA,
MUSK,
CAMPHOR,

VOLATILE

VOLATILE ALKALI,	IPECACUANHA,
FLOWERS OF ZINC,	IRON,
WHITE VITRIOL,	RHUBARB,
PERUVIAN BARK,	SABINE.

Before I quit this ſubject, I would beg leave farther to obſerve, that though I have placed the doſes of medicines as uſually adminiſtered to adults; in all active medicines, I ſhould recommend them to be given in ſmall doſes at firſt, and gradually increaſed, till we have arrived at the fulleſt that the conſtitution can bear with eaſe, as the only mode of trying what good effect may be produced by their powers: and here we ſhall often find a ſurpriſing difference in the quantity neceſſary to promote the end deſired—for I have known two grains of a very active medicine produce as powerful an effect on one conſtitution, as eight or ten would on another; and this knowledge can only be obtained by particular experience. Indeed, I have known complaints cured by the very ſame medicine under the management of one practitioner, that had failed in the hands of another; which only aroſe from the different modes of management reſpecting the quantity adminiſtered.

With regard to the forms in which medicines ought to be exhibited, the intent to be anſwered ſhould be particularly conſidered; whether the *expeditious* or *permanent action* is moſt eligible---if the former, they ſhould be given in liquid---if the latter, in ſolid forms ---becauſe in their diffuſed ſtate they act moſt quickly.

For a very great variety become effectual by communicating their power from the ſtomach to the reſt of

the machine ſympathetically; conſequently the larger ſurface of the ſtomach they touch at the ſame time, and the ſtronger their action, the quicker and more powerful will be their effect---In acute caſes, therefore, theſe purpoſes will be beſt anſwered in a ſtate of ſolution: but, on the contrary, in chronic caſes, ſolid forms are preferable; becauſe they occaſion medicines to act ſlowly, and, of courſe, make that action more durable, by remaining longer on the ſtomach;---beſides, all medicines which are not eaſily ſuſpended in any liquid, ſhould be adminiſtered in form of *bolus*---*pill*---*electuary*---or *powder* mixed with ſyrup or ſome other viſcid ſubſtance;---thoſe which are volatile, very light, or readily miſcible with any menſtruum, ſhould be given in *mixture* or *draught*. Where a greater proportion of any vegetable body is required than the ſtomach can bear in powder, and where the active part can be extracted by water, *decoction* or *infuſion* is the moſt proper;---and all oleaginous ſubſtances require the addition of ſome intermediate viſcid body, to make them properly incorporate with watery fluids, or ſyrups, and are moſt elegantly adminiſtered in form of *emulſion* or *linctus*.

Though ſome ſmall difficulty may ariſe to readers ſlightly converſant in medical reſearches, on the peruſal of this part of the work which treats on medicine---ſtill, by beſtowing a little pains on each diviſion---from the advantage they will receive, they will not find their labour ill beſtowed---for they will be taught the ſimpleſt, moſt eaſy, and certain mode of preſcribing, as well as the moſt powerful---they will alſo underſtand,

from the knowledge of the different powers of medicine, not only where they are likely to be ſerviceable, but where they will be of dangerous conſequences---a ſpecies of information which every man ought to poſſeſs, who dares venture to preſcribe either for himſelf or others:---for the firſt law of phyſic is, NOT TO DO HARM IN ALL OUR EFFORTS TO DO GOOD; of which no man can be certain without he knows preciſely the active properties of ſuch medicines as he adminiſters; and whether they are properly adapted to the conſtitution, under the circumſtances of the morbid attack which he labours to remedy.

SECTION VIII.

ON DISEASE IN GENERAL.

HAVING finiſhed thoſe parts of our work which were conſidered as preparatory to the more complicated, we muſt now enter on an inquiry into the nature of diſeaſes, with the beſt modes of diſcovering and curing them.—But, previous to this, it will be of uſe to ſay ſomething general on the ſubject, in order to ſhew what is meant by diſeaſe—how diſcovered and diſtinguiſhed—the different cauſes—with the indications of cure.

By DISEASE is meant a general or local affection, by which the ſyſtem is diſturbed, or the action of a part impeded,

impeded, perverted, or deſtroyed—or, an appearance deviating from health, from ſome general, partial, or local affection, by which the ſyſtem in general, or in a part, is oppreſſed or disfigured—and this is *diſcovered* and *diſtinguiſhed* by an enumeration of certain ſymptoms or appearances with which it is always aſſociated.—But diſeaſes differ; hence it is neceſſary to diſtinguiſh them from each other, with which they may ſeem to have a near affinity—this is done by the cauſes and peculiarities that are connected to them; and from whence the deviation ariſes.

The cauſes of diſeaſe are threefold:

1. PREDISPOSING—When the conſtitution collectively, or in part, is in ſuch a ſituation as is moſt favourable to produce diſeaſe; or to receive the impreſſion made by its cauſe immediately conſidered;—and theſe are either

Inherent or *hereditary*,

Adventitious or *accidental*,

put into action, or brought about by the

2. REMOTE, or INDUCING, which depend upon the ſtate of air—climate—ſituation—mode of life—indiſcretion—or the elective power of morbid particles, called *miaſmata---virus---effluvia*---occaſioning the

3. PROXIMATE, or IMMEDIATE, which are ſuch as from their action conſtitute the immediate ſource of diſeaſe—and from whence ariſe the

INDICATIONS OF CURE, which conſiſts in the removal of the operating cauſes; or the preventing the conſtitution feeling too powerfully certain effects, till the matters occaſioning them can be thrown out of the habit, either by the efforts of nature, or of art.

But

But the moſt eligible mode is the PREVENTIVE, acquired by the conſideration of the remote or inducing cauſes, where practicable—and hence preventing prediſpoſition from being rendered active, by intercepting theſe cauſes, or guarding the habit againſt their influence.

This account, conciſe as it is, comprehends the whole practical part of medicine; from whence though ſhoot forth a variety of branches, which we ſhall diſpoſe under the following heads, agreeable to ſuch appearances as moſt ſtrongly manifeſt themſelves to our perception, whether FEBRILE—INFLAMMATORY—PAINFUL—NERVOUS—or MENTAL—or where evacuations are contrary to, or more copious than what is natural, ſtiled FLUXES—where difficulty of breathing is the crying ſymptom, called ASTHMATIC—or where the complaint depends upon the humours of the machine, or make their appearance upon the ſkin.

CHAP. I.

FEBRILE AFFECTIONS IN GENERAL.

ALL thoſe are ſo conſidered where there is an alteration reſpecting the pulſe and heat; for the moſt part, an increaſed quickneſs of the former, and the latter augmented in ſome degree;—many of the functions of the machine injured—particularly the ſtrength of the limbs diminiſhed; attended with chillneſs, lan-

guor,

guor, laſſitude, and other marks of weakneſs, without any local primary diſeaſe.

Under this head is comprehended all the fevers, of whatever nature, by which the human frame is afflicted; but, as they put on different appearances, they are divided under diſtinct heads, according to thoſe appearances, as

1. CONTINUED, or CONTINENT.
2. REMITTENT,
3. INTERMITTENT,
4. HECTIC, and
5. ERUPTIVE.

In which order we ſhall purſue them;—but we ſhould firſt remark, that all thoſe are called

CONTINUED FEVERS,

where they continue from their commencement to their termination without any intermiſſion, remarkable remiſſions, or exacerbations, that is, increaſe of violence in the ſymptoms. To this claſs belong

1. The ſimple continued
2. Inflammatory
3. Nervous
4. Putrid
5. Anomalous, or mixed

} Fever.

Theſe fevers in general begin with laſſitude---coldneſs—ſhivering, but without tremor or grinding of the teeth, and heavineſs of the head—then the heat increaſes every day till the height, with proſtration of ſtrength, and a conſtant deſire of lying down—headach—and thirſt—no exacerbation or increaſe of febrile affection,

affection, except from ſome perceptible cauſe. At the decline of the diſeaſe, there appears a moiſture, ſwear, or ſome other evacuation.

With reſpect to ſenſation, the ſymptoms diſcover themſelves by a ſenſe of wearineſs all over the body---a heavineſs, attended with giddineſs of the head—headach—bad taſte in the mouth—often an imperfect, or depraved ſmell---a difficulty and tottering in motion---unwillingneſs to ſpeak---a deſire to keep in an horizontal poſition---a total want of, or ſcarce any appetite---great thirſt---loathing of animal food, or any ſolids---a deſire for watery acidulated cold liquids---no laſcivious inclination.

In the cold ſtate, breathing is ſmall, quick, oppreſſed ;—*in the hot*, deeper and frequent ;---*in the cold ſtate*, the pulſe is ſmall, intermitting, interrupted, and frequent ;—*in the hot*, full and frequent ;---*in the declenſion*, full and undulating.

The ſaliva is ſmall in quantity, clammy ;---the mucus of the tongue, gums, and lips is greyiſh, rather yellow, and ſometimes black—the urine in the courſe of the diſeaſe becomes hotter and turbid—there is a moiſture in the ſkin and a ſweat *in the declenſion of the fever*—the ſtools are liquid, yellow, often fœtid—the mucus of the noſe trifling ; and ſometimes from thence hæmorrhages iſſue.

Fevers of this kind are often uſhered in with a coldneſs of the extremities and paleneſs of the face—very often without any ſhaking of the limbs ;—after that there is a conſtant uniform heat, for the moſt part, except

cept that it is greater *towards the height*; there is alſo *in the declenſion* a ſoftneſs of the ſkin.

This is the hiſtory of the continued order of fevers in general, with ſuch things as appear in the vital and animal functions with reſpect to ſenſation, voluntary motion, appetite, reſpiration, and the pulſe; and alſo in the excretions and qualities of the ſolid parts.

Now as all the fevers of this kind have a greater or ſmaller number of theſe ſymptoms attendant, under each head we muſt enumerate ſuch as will beſt inform us to which it particularly belongs, that we may be beſt enabled to make proper diſtinctions; and as the ſimple continued fever is the leaſt complicated, we ſhall begin with that.

§ 1. SIMPLE CONTINUED, OR VASCULO-PLETHORIC, FEVER.

Such I would name it, becauſe an increaſed action of the vaſcular ſyſtem, and fullneſs of blood, are the immediate cauſes.

This fever is ſometimes of very ſlight duration, terminating in one, at moſt, in three or four days, and ſeldom requiring any medical aſſiſtance.

DESCRIPTION. It makes its attack very often ſuddenly.

There is a ſlight coldneſs—the whole body grows red, particularly the face, attended with ſome turgeſcence, and a vaporous warmth. The head-ach comes on ſuddenly, the temples throb, the breathing is frequent, the pulſe free, uninterrupted, quick, and full. *In the decline* of the diſeaſe, there appears a breathing ſweat, with no remarkable change in the urine.

CAUSES. Whatever will ſupernaturally increaſe the action of the veſſels, and induce too great fullneſs of blood in the habit, as errors in diet—too violent exerciſe—cold—ſuppreſſion of ſome natural diſcharge—retention of ſome acrid matters offenſive in the firſt paſſages—from ſome external injury—happening in an healthful conſtitution.

CURE. Medical aid is ſeldom in theſe caſes neceſſary—nature moſt commonly is the phyſician. Drinking copiouſly of watery liquids warm, ſuch as tea, weak broths, lemonade, ſmall negus; abſtaining from all ſolid food; and lying in bed to encourage perſpiration, will be all that is requiſite.

Or, if medicine muſt be employed, ſaline mixtures, or nitrous powders, may be had recourſe to. (No. 1, 2.)

But ſhould the fever put on more violent appearances—ſhould the pulſe not only be full, but rather hard, with any conſiderable degree of oppreſſion and heat, and the ſkin dry; bleeding, according to the patient's ſtrength, to the quantity of eight, ten, or twelve ounces, may be adviſed—and, in caſe of coſtiveneſs, a cooling ſaline purgative (No. 3.) may be adminiſtered, to produce three or four evacuations—and in order to appeaſe any hurry which perhaps it may occaſion, a quieting draught in the evening. (No. 4, 5.)

Suppoſe theſe ſhould not ſucceed to our wiſh, and the ſymptoms before recited increaſe, the pulſe excepted with reſpect to its fullneſs and hardneſs, theſe being in ſome degree abated; and the patient has paſſed a reſtleſs night; we muſt then fly to antimonials, as the moſt effectual in checking the violence of the fever.—

The

The moſt eligible of which are, tartarized antimony, formerly called tartar emetic, or the antimonial powder of the laſt London Diſpenſatory, a medicine anſwering every purpoſe of Dr. James's Powder. (No. 6 to 9.)

The firſt doſe of the mixture (No. 8.) or the ſecond, if it meets with any foulneſs of the ſtomach, generally excites vomiting, which ſhould be encouraged by copious draughts of chamomile, or weak green tea, or thin gruel—and afterwards the mixture continued.

It produces alſo in general a gentle ſweat. One or two evacuations by ſtool—quiets the pulſe—takes off the oppreſſion and nauſea—this, by its continuance, and ordering balm tea, barley water, or ſome ſuch diluting liquor, to be drank plentifully, baniſh, in common caſes, every complaint.

But, notwithſtanding all theſe efforts, ſhould things wear a more unpromiſing aſpect—ſhould the ſickneſs and oppreſſion continue; the thirſt, heat, and dryneſs of the ſkin increaſe; head-ach become intolerable; the patient very reſtleſs; the pulſe keep up, or increaſe in fullneſs and hardneſs particularly, more blood muſt be taken away—though, ſhould there be indications of great debility, and the pulſe flag and grow low, it muſt be avoided—the feet may be put into warm water—and, in continuing the antimonials, great care muſt be taken that they do not operate too violently upwards or downwards, for theſe would aggravate the ſymptoms, or bring on a train of others of more ſerious conſequence.

Under

Under theſe circumſtances, inſtead of the ſaline mixture before preſcribed, the neutral volatile ſaline (No. 10.) is more eligible, becauſe this, I think, determines more freely to the ſkin—and, trifling as the alteration may appear, I have ſeen changes obviouſly for the better on its being adminiſtered.

Notwithſtanding the above caution, if emetics have been omitted in the beginning, particularly if there has been any ſickneſs or nauſea, they may be given at any period of the diſeaſe, if the ſtrength of the patient will admit. (No. 11, 12.)

SYDENHAM ſays, "If any one ſhould inquire at what "time of the fever I would have a vomit adminiſtered, "I ſay poſitively, at the beginning; but ſhould we be "called in ſo late, which is often the caſe, that we "could not at the beginning give a vomit to the pa-"tient for their relief, yet certainly I thought it expe-"dient that it might be done at any time of the fever, "if the diſeaſe has not ſo reduced the ſtrength, that "its violence cannot be borne.—I have," continues he, "ordered a vomit without heſitation on the twelfth "day of a fever, when all the retchings had ceaſed; "nor was it unattended with advantage."

But, to return to our ſubject. If, by the uſe of antimonials, the body ſhould not be kept properly open, glyſters, (No. 25, 26.) ſhould ſupply the defect, adminiſtered in the evening.

From this treatment, a continued fever of this kind ſeldom remains longer than the fifth day; but ſhould it purſue its courſe to any later period, it is difficult to determine at what time it will ceaſe.

Here we muſt be extremely cautious in our prognoſtic, both with reſpect to its duration and danger; for there are often in the conſtitution many latent miſchiefs which do not ſhew themſelves; or ſome, which manifeſt themſelves not immediately, may be brought upon the internal and vital parts by the febrile exertions, that when we have a right to expect every favourable concluſion, theſe ſuddenly prevent the operations of nature, and in an inſtant overturn all our flattering proſpects.

However, if this fever goes not off on the fifth day, it ſeldom continues longer than the fourteenth—during that ſpace, we are then to endeavour ſo to regulate the moving powers of the ſolids, that they may neither act too powerfully nor too weakly—hence are they to be ſupported in a ſtate of moderation—and this we do by thin diet, ſubacid drinks, ſuch as the ſtomach can bear and reliſh; as thin gruels, roaſted apples, oranges, boiled turnips, and ſuch like, continuing, under various forms, the uſe of the antimonial ſaline mixture.

Beſides the attention we have to pay to the ſyſtem in general, ſometimes the head, ſtomach, and bowels require our notice, in order to alleviate the particular affections under which they labour—for the head now and then is greatly diſordered—bliſters applied between the ſhoulders, bathing or fomenting the feet with warm water, bring in theſe caſes relief, and diſpoſe the patient to reſt.

If ſourneſs ſhould affect the ſtomach and inteſtines, creating pain and flatulence, we ſhould unite with our medicines ſome of the abſorbent earths, as magneſia, chalk, hartſhorn, crabs eyes or claws prepared, according

ding as the habit is diſpoſed to coſtiveneſs, or otherwiſe—under the firſt circumſtance, magneſia—under the laſt, prepared hartſhorn claims the preference.

In the manner above recited ſhould we go on as occaſion may require, till nature throws off her oppreſſive load at ſome of her accuſtomed periods, which will be either on the ſeventh, ninth, eleventh, or fourteenth day commonly—or, if the fever is of longer duration, ſeventeenth or twentieth. After this period they are ſeldom obſerved with any accuracy.

But ſuppoſe towards the cloſe the ſtrength of the conſtitution appears to be in a debilitated ſtate, the pulſe begins to ſink, and the machine requires ſome ſtimulus, in order to rouſe it to, and preſerve its action—here we muſt have recourſe to ſuch applications as will invigorate the ſyſtem; our former drinks and medicines muſt be altered; we muſt now give wine and water, white wine whey, or pure wine—or, if medicines are preferred, cordial, camphorated, and ſtimulant medicines. (No. 13 to 18.)

But wine will beſt anſwer the purpoſes we require, as it is conſidered to be the moſt grateful cordial with which we are acquainted.

However, if any others are thought more eligible than what we have ſelected, the claſs of ſtimulants will ſupply a ſatisfactory variety.

Before we cloſe it will be neceſſary to obſerve, that much caution is neceſſary in pronouncing the approach of a criſis, or termination, or its perfect completion---for it ſometimes begins and recedes.

On this occaſion we ſhould take the ſymptoms collectively; and, if they all appear favourable, wait for

their continuance—for they will begin on one critical day, and not be complete till the next. If, therefore, the pulſe becomes ſoft and full, and ſubſides daily, ſomething below a healthful ſtandard—the urine depoſits a ſediment to the bottom of the glaſs, or, on ſhaking, it ſubſides—the ſkin becomes ſoft, and a general ſweat ſucceeds—if the patient's ſenſes return after having ſlept, we may venture to pronounce boldly.

After matters are brought to this pleaſing concluſion a doſe or two of phyſic may be exhibited. (No. 19, 20, 21.)

The patient ſhould return gradually to his accuſtomed courſe of life, leſt he ſhould, by throwing food into the habit in too large quantities, oppreſs the digeſtive powers, which, with the reſt of the body, muſt be in a ſtate of too great debility to perform their functions vigorouſly. His diet, therefore, ſhould not only be ſmall in quantity, but of the lighteſt ſort; becauſe, from viſcid food, the machine would labour under the ſame inconveniences as above ſpecified—he ſhould eat often, but ſparingly, take freſh air, and uſe moderate exerciſe, ſuch as his ſtrength will admit, but never purſue it to fatigue himſelf. Under ſuch prudent management, his ſpirits and vigour will return rapidly; and he will every day perceive himſelf making large ſtrides towards his uſual ſtate of health.

§ 2. INFLAMMATORY, OR VASCULO-SANGUINEOUS INFLAMMATORY FEVER.

Becauſe not only the ſame circumſtances occur as in the former fever, with regard to the increaſed action of the

the vaſcular ſyſtem, and fullneſs of blood—but the veſſels have acquired a ſupernatural firmneſs, and the blood too great tenacity, by which I underſtand an inflammatory diſpoſition.

DESCRIPTION. The patients at firſt feel as if they were wearied and had been beaten; are apparently weak, and have cold and hot fits alternating with each other; they tremble, and feel pains all over them, particularly in the ſhoulders, back, knees, and head: to theſe ſucceed an intenſe and burning heat, unextinguiſhable thirſt; their eyes appear inflamed, with a redneſs and fullneſs of the face; they are ſick and vomit; are alſo reſtleſs and uneaſy; the pulſe is full and ſtrong; the ſkin dry; the urine for the moſt part high coloured, but ſometimes like water; the tongue rough, dry, brown or black, and furred; blood drawn is very tenacious, and, on ſtanding, covered with a coriaceous ſubſtance like buff-leather; they breathe with difficulty; the body is coſtive; they ſometimes cough; are very watchful and delirious; a ſtupor and drowſineſs come on; at laſt tremblings, twitching of the tendons, hiccough, and an involuntary emiſſion of fæces and urine cloſe the fatal ſcene. With regard to the heat, it is of a particular kind, which, though it affects the touch very ſenſibly at firſt, yet ſeems to grow leſs violent the longer we hold the hand upon the ſkin of the patient.

As to the pulſe, its hardneſs, ſtrength, and fullneſs, are in greater degrees than are to be met with in any other ſpecies of fever.

And the urine is not only high coloured, but ſharp, and in ſmall quantities.

CAUSES. Thoſe which are called *the remote or inducing*, are ſaid to be, perſpiration obſtructed ſudden cold; too much expoſure to the ſtrong heat of the ſun; fatigue; anger; hard drinking; too long watching; cold water drank whilſt the machine is hot; or, in fine, whatever can put the veſſel into too ſtrong and quick action, and for ſome time continue it.

The *proximate or immediate*, acrid and tenacious blood obſtructing the very minute, ſerous, and ſanguinary veſſels in different places, and increaſed ſtrength and activity of the vaſcular ſyſtem, which the remote cauſes are concluded to confirm, as well as the appearances of blood taken away—the ſymptoms—mode of cure—and the inſpection of dead bodies on diſſection, —for in them the viſcera are found in a ſtate of inflammation and mortification.

Young people in the vigour of life, ruſtics, ſanguineous habits, free luxurious livers, and all thoſe poſſeſſed of ſtrong ſtamina and tenacity of the circulating fluids, are moſt prone to fall into this fever.

CHARACTERISTIC SIGNS. This fever generally attacks thoſe who are formed with ſtrong vigorous ſtamina and denſe blood:—it is conciſely defined, a great increaſe of natural heat, a frequent, ſtrong, hard pulſe, high-coloured urine, ſometimes watery, and the functions of the ſenſorium a little diſturbed.

CURE. This is performed by weakening the ſtrength and activity of the vaſcular ſyſtem, leſſening the violence of their action, and thinning the blood.

If we were to remove the irritating cauſe ſoon after it had exerted its action, there is no doubt but every good conſequence would accrue; but that we cannot

do in all caſes, particularly when morbid particles have got ſo blended with the juices, that ſome time is required before they can be properly prepared for being thrown out of the body;—or, after the increaſed action had continued ſo long, that it had by its effects contaminated the fluids; we therefore endeavour to put the frame in ſuch a ſituation, that no violent miſchief ſhall be created by the progreſs of the diſeaſe; and thus give nature an opportunity of exerting her ſalutary efforts with effect, and enable her to throw out the offenſive materials from the maſs of fluids.

For which purpoſe, if called in in the early ſtage, we depend upon bleeding copiouſly, and repeat it agreeable to the patient's ſtrength, until the pulſe is reduced to its proper ſtandard—nor muſt we be deceived by the apparent oppreſſion of the pulſe, for by bleeding it becomes ſtronger—indeed *apparent* weakneſs and loſs of ſtrength proceed ſometimes from too great fullneſs; ſo that the volume of fluids ſeems too powerful for vaſcular action; and unleſs this oppreſſion is taken off, which bleeding moſt readily accompliſhes, we ſhould run the riſque of their total ceſſation. Indeed, ſo neceſſary is this operation at the onſet of theſe fevers, that if it is omitted, the neglect can ſeldom be recovered during the whole courſe.

It is moſt proper before the fourth or fifth day, but, under ſome circumſtances, it may be performed at a later period—in difficult and oppreſſed breathing—violent pain of the head, with high delirium, ſucceeded by drowſineſs, in full and ſtrong habits—for theſe

ſymptoms indicate an inflammation of the lungs, or a ſuperabundant load of blood in the brain.

Notwithſtanding it *may be right* in any ſtage of the diſeaſe, it is only to be adviſed with extreme caution; for if this operation is carried to exceſs, ſo as greatly to weaken the patient, nature may be diſqualified for throwing off the morbid matter at the time when the criſis ſhould come on; which matter is moſt naturally carried out of the body, either by diſcharges from the inteſtines, kidneys, or the pores of the ſkin.

With reſpect to the neceſſity of repeating the bleeding, we are to be directed by the urgency and continuance of the ſymptoms: therefore after the firſt bleeding in ſix or eight hours, if the pulſe ſhould be nearly, or equally as hard and quick as before, and the other febrile ſymptoms ſimilar, it may be repeated, though in ſmaller quantity, and even a third or fourth time, or more, under ſimilar circumſtances, may be neceſſary.

We are next to advert to the ſtate of the ſtomach and bowels:—if there ſhould be any oppreſſion, nauſea, ſickneſs, flatulence, or weight at the pit of the ſtomach, or fullneſs there—ſhould the body be coſtive, we ſhould attempt immediately to clear them of their contents by emetics, (No. 11.) and gentle purgatives. (No. 3. 22 to 24.)

But ſhould there be any inflammation of the ſtomach or inteſtines, vomits muſt be by all means avoided, as they might be ſucceeded by the moſt fatal conſequences.

But ſhould not any of the above ſymptoms occur, we muſt then endeavour only to take off the ſpaſmodic

affection

affections of the ſkin, and promote perſpiration, by creating gentle vomiting or nauſea, by adminiſtering ſlight doſes of antimonials alone, or mixed with ſaline mixture. (No. 6, 7, 8, 9.) Warm watery liquids ſhould be drank copiouſly, the legs and thighs fomented with flannels wrung out of warm water, or the ſame liquid thrown up by way of glyſter; for theſe are highly beneficial in thinning the blood, and relaxing the too tenſe fibres.---And here we muſt obſerve, that bleeding, where neceſſary, ſhould always be performed before we exhibit a vomit, in order to take off the general fullneſs of the habit, and prevent any congeſtion or obſtructions taking place by its operation in the brain.

In caſe of coſtiveneſs, we ſhould add ſmall doſes of tartarized or vitriolated kali, tartarized natron to the antimonials, (No. 6, 7, 8, 9.) caſſia draught, cryſtals of tartar whey, or infuſion of tamarinds, may be adminiſtered. (No. 22, 23, 24.)

We muſt next endeavour to allay the heat by vegetable acids mixed with ſmall portions of nitre; and depend on ſuch things as are cooling, diluent, and aperient; and correctors of any acrimony which may keep up the irritation—hence all animal ſubſtances are to be rejected, becauſe they are apt to become too ſtimulant and heating—and for the ſupport and aſſiſtance of nature, we muſt depend upon *barley water---lemonade---apple-water---infuſion of wood ſorrel---currant jelly mixed with water---very weak white wine whey mixed with Seltzer water*---in any of which may be diſſolved ſmall portions of nitre, ſo that four or five grains may be taken at a time; or the æthereal ſpirit of nitre, ten or fifteen

teen drops for a doſe—or, the *Hydromel of Hippocrates*, (ſee page 275.) omitting the mace; for theſe are diluent, aſſiſt in quenching thirſt, preventing the blood from becoming too acrimonious, help to diſſolve its tenacity, conſequently weaken the force of the vaſcular ſyſtem, abate the power of the circulation, take off ſpaſmodic conſtriction, and promote perſpiration;—and theſe liquids may be varied according to the pleaſure of the patient.

Abſtinence, as long as the ſtrength will permit, ſhould be adviſed; but if that becomes defective, it ſhould be ſupported only by the moſt light liquid food. If ſolids be required, which is ſeldom the caſe, not any thing ſhould be allowed except thin panada---water or barley-gruel---roaſted apple, or boiled turnip. The ſweet aceſcent fruits, *when fully ripe*, may be taken freely; for, as they abound with watery particles, are alſo diluting; and as thoſe of the vegetable claſs afford leſs nutrition, conſequently are leſs ſtimulant than ſuch other things as approach nearer to animal nature.

So long as the ſymptoms continue ſtrong, we muſt chiefly adhere to the ſaline medicines---antimonials and nitrous powders, (No. 1, 2. 6, 7, 8, 9.) giving the nitre as freely as the ſtomach will bear it, and varying the form as may be judged convenient; for theſe medicines are thought to correct acrimony, take off vaſcular conſtriction, and promote perſpiration.

The room in which the patient lies ſhould be ſpacious, and well ventilated with cool freſh air, impregnated with vinegar, the effluvia of freſh flowers, and a free circulation

circulation conſtantly permitted; taking care ſo to diſpoſe the patient, that ſtrong currents may be avoided.

The bed-cloaths ſhould only, as in health, be moderate, the curtains not cloſe drawn; and, in fine, every thing heating, and which can increaſe the force and quickneſs of the pulſe, muſt be prohibited.

The patient ſhould now and then be got up, he will be rendered leſs reſtleſs, preſerve his ſtrength more, and not ſo ſubject to increaſe of head-ach and delirium; for, by ſitting up in an erect poſture, the blood will circulate with leſs force towards the brain, than in an horizontal ſituation; and obſtructions will not be ſo liable to be formed there, nor will the brain be ſo likely to ſuffer depreſſion from a load of fluids.

After proper evacuations having been premiſed, ſome adviſe the application of bliſters; becauſe, ſay they, they diſſolve the viſcid blood, open internal obſtructions, and ſoften the pulſe.

Others are of opinion, that they never can be right, *though a delirium ſhould come on*, if the pulſe keeps full, hard, and quick; but think the head is better relieved by bathing the feet in warm water, or applying cloths ſqueezed out of it to them, and the inſide of the thigh juſt above the knee---for the nervous ſyſtem muſt be diſturbed and agitated too freely where the heat continues great, the ſkin dry, with the pulſe as repreſented —hence bliſters, while ſuch ſymptoms appear, and the fibres are too tenſe, will increaſe the miſchief, from the additional ſtimulus they occaſion.

In delicate conſtitutions, where there is great proneneſs to nervous incitability, and muſcular irritability rather

rather defective, bliſters may be uſeful, by regulating the motion of the nervous power, and not being capable of producing any great effect on the muſcular fibres---but, in ſtrong athletic habits, I ſhould think the practice dangerous; but yet, where the pulſe in any conſtitution grows ſoft, and begins to flag, either from evacuations, or weakneſs of the ſyſtem, brought on in the courſe of the fever, *particularly if attended with drowſineſs, or diſpoſition to conſtant ſlumbering*, towards the height or turn of the fever, at that time they will be found extremely beneficial---by rouſing the nervous ſyſtem, and aſſiſting nature in producing a ſeparation and ejection of the morbid cauſe.

Should what we have before adviſed prove ineffectual in preventing coſtiveneſs, as more powerful purgatives would be apt to raiſe too great a commotion, and impede nature in her ſalutary efforts, we muſt have recourſe to glyſters. (No. 25, 26.)

Towards the evening, in almoſt all acute complaints, every ſymptom increaſes much with reſpect to violence, and towards the morning abates;---but when the turn of the fever is near at hand, the violence continues more uniform throughout, nature appearing to exert her utmoſt efforts to conquer the diſeaſe, by throwing off the offending matter---hence the agitation of the whole machine is extremely ſevere.

If now the ſkin grows ſoft and moiſt---the tongue loſes its dryneſs---the urine begins to depoſit a whitiſh ſediment, and becomes leſs high coloured---and ſoon after a more profuſe ſweat breaks out---the other ſymptoms abating of their violence---we may expect a happy termination, ſhould theſe occur upon a critical day,

particu-

particularly if a ſound ſleep comes on, followed by refreſhment, loſs of thirſt, the tongue clearing away its foulneſs, and the head alleviated from its pain and uneaſineſs.

From theſe appearances we may conclude a criſis is begun; and in its progreſs, if the pulſe grow gradually ſlower, falling ſome ſtrokes in a minute below its healthful ſtandard, we may be aſſured that things have taken a favourable turn, and that the patient is ſecure from danger.

But during this conteſt in the critical period, which will be for ſome days from the beginning to its termination, cordials may be thought neceſſary, the beſt of which is wine, given alone or in whey. If medicines to anſwer the purpoſe are thought more agreeable, to what we have delivered from No. 13 to 18, may be added other cordials.

But if I find nature in her critical intention points more to the kidneys than to the ſkin, I prefer joining the cordials to the ſolution of prepared kali and lemon juice, (No. 1.) if to the ſkin, to that of prepared ammonia. (No. 27.)

But ſometimes, from all our efforts, we are not even flattered with a favourable iſſue---however we muſt not deſpair---nature often relieves herſelf at the moment we leaſt expect it.

Therefore, when the conſtitution ſeems drooping, and nature appears almoſt exhauſted, when general tremors come on, twitching of the tendons, delirium, and the patient parts with both fæces and urine involuntarily---which appearances are always conſidered to be

the reſult of ſtrong nervous affections, giving the diſeaſe the moſt unhappy aſpect—in this deplorable ſtate we depend upon the repetition of bliſters, applied in the following ſucceſſion: 1ſt, to the back—2d, under the arms—3d, above the wriſts—4th, above the knees on the inſide of the thighs—and, 5th, upon the head, if violent pain or much diſturbance there, points out the rectitude of ſuch an application—and likewiſe muſtard poultices, called ſinapiſms, to the feet, (No. 30.) and give volatile ſalts—camphor—muſk, (No. 31 to 35.) in order to allay ſome of thoſe convulſive affections which preſent themſelves at this period—for which muſk mixed with valerian is eſteemed highly uſeful.

In caſes of extreme languor, ſnake-root is a very valuable medicine, which may be given in infuſion or powder. (No. 36, 37.)

As nature, under the violence of theſe oppreſſions, being relieved in one point, may have power probably to exert herſelf more generally from ſuch relief, a VAPOR BATH, as it can be applied in a bed-chamber, and has in dangerous caſes been known to ſucceed, may be tried, as it ſeems calculated to take off, by its relaxing power, ſpaſmodic conſtriction.

Sometimes in this diſeaſe, at an early period, people will be much afflicted with the head-ach, delirium, watching, or drowſineſs, bleeding at the temples with leeches—applying bliſters there—having the head ſhaved and rubbed with vinegar—or portions of the lungs of a lamb applied warm to the head—bliſtering and fomenting the legs, and applying muſtard poultices to the ſoles of the feet, are uſeful auxiliaries to the general

neral mode of cure above ſpecified—as is alſo bliſtering the head:—or ſhould they have any pains ſimilar to thoſe of pleuritic people, applying a bliſter over the part affected is beneficial.

Sometimes rheumatic affections will be a concomitant—in this caſe, large doſes of nitre will be uſeful—and ſhould any dyſenteric appearances, ſuch as uneaſy pains in the bowels, propenſity to go to ſtool, without producing any evacuation; a grain or two of ipecacoanha, given now and then, may act as gentle aperient, ſolicit the diſcharge of the irritating matter, and carry it out of the bowels. To me it obviouſly appears, that theſe applications are only to alleviate the ſymptoms ariſing from the local affection of a part, from a more general cauſe; whilſt, at the ſame time, we muſt perſiſt in the general mode of cure;—why we endeavour at their particular alleviation, is to prevent nature from being diſturbed in her operations by theſe diſtreſſing or anomalous ſymptoms; as by inattention to them the danger might be increaſed, and the malady prolonged; for theſe ſymptoms, for the moſt part, are ſubdued by time alone, and the fever being kept within proper limits.

§ 3. NERVOUS FEVER.

This is ſo named, becauſe the *nervous ſyſtem* appears to be the part moſt affected. It differs from the inflammatory fever in the part of the conſtitution attacked, and occurs in ſuch as are diſſimilar. Here the nervous ſyſtem is defective, attended with little or no intenſeneſs of vaſcular motion; the fluids are alſo poor

and

and thin, and the nerves extremely incitable. This is alſo called the ſlow fever, becauſe it is ſlow in its progreſs compared with other fevers, particularly the foregoing.

DESCRIPTION. This fever makes it attack with dejection of ſpirits---loſs of appetite---oppreſſion ---diſturbed ſleep, or reſtleſsneſs—the patient often ſighs and groans involuntarily — is frequently terrified, and affected with uncommon laſſitude after exerciſe, though that ſhould be ſlight, and at the ſame time has cold and hot fits ſucceed, and alternate with each other—he is troubled with nauſea, and a vomiting of inſipid phlegm, which come on in a few days after the attack, with giddineſs and pain of the head---extreme proſtration of ſtrength---no remarkable heat---no thirſt---the pulſe is frequent, weak, and ſometimes intermits---the tongue continues moiſt, white, and is covered over with a viſcid mucus---there is an oppreſſion at the pit of the ſtomach, and the breathing difficult---the urine is pale, watery, and ſometimes like milk whey---the face red, and fluſhes, at the ſame time that the feet are cold---the mind is ſlightly diſturbed by ridiculous imaginations, which continues, but without any violent delirium---ſometimes immoderate ſweats break out, or colliquative, diſſolving looſeneſs comes on---the ſenſes loſe their quickneſs, and become dull and heavy---with anxiety and fainting attending.

Towards the cloſe, when nature appears almoſt worn out by the continuance of the diſeaſe; the tongue trembles--- the extremities grow cold---the nails

livid

livid---they loſe the power of ſight and hearing---the delirium is converted into ſtupor, and a lethargic diſpoſition---the fæces and urine paſs away involuntarily---twitching of the tendons come on---and generally convulſions cloſe the ſcene, in death.

CAUSES. The *remote* or *inducing cauſes* are ſaid to be relaxed fibres, and a weak nervous ſyſtem---too powerful evacuations---ſalivations from taking mercury too frequently repeated---immoderate venery---mental affliction---watching, and nocturnal ſtudy---moiſt and ſtagnant air of ſubterraneous jails and confined places; a crude and too thin diet, particularly of cold and watery fruit---watery and viſcid drinks---rainy ſeaſons---a moiſt and ſoft winter---and, in fine, all thoſe things which by ſlow degrees debilitate the nervous ſyſtem.

The *proximate* or *immediate*, great apparent incitability in the nervous ſyſtem---a lentor, and viſcidity of the ſerum, lymph---and thin humours with acrimony from contagion or obſtruction---and a torpor, or defect of intenſeneſs of motion in the vaſcular ſyſtem; which are obvious from the blood taken away---phlegm thrown up from the ſtomach---and appearances agreeing with diſeaſes ariſing from corrupted and contaminated ſerum---Hence is it ſuppoſed to exert its influence upon the moſt minute, ſerous, lymphatic, and nervous veſſels; but rather upon the whole brain, as the pale wan colour, paleneſs and dryneſs of ulcers, a deprivation of the ſenſes, extreme debility, and ſuppurations in the brain upon diſſection, point out.

CHARACTERISTIC SIGNS. In defining this diſeaſe, I ſhould ſay, it was an affection of the nervous ſyſtem, in which there was apparent incitability, with a thickneſs of the ſerum, lymph, and thin humours—a torpor, or defect of intenſeneſs of motion in the vaſcular ſyſtem, independent of nervous incitability, diſcoverable by ſlight chills—ſhivering—and uncertain fluſhings of heat—ſinking and dejection of ſpirits—frequent involuntary ſighing—general weakneſs ---quick irregular pulſe---pale coloured urine---remarkable propenſity to ſpaſmodic affections---no diſtreſſing thirſt---ſometimes retching, though nothing but ſimple phlegm evacuated.

CURE. As affections of this kind will ariſe from different kinds of foulneſs in the firſt paſſages, if we are called in early, its progreſs is eaſily prevented, by gentle emetic, (No. 11, 12.) and ſmall doſes of rhubarb, manna, caſtor oil, and ſome ſuch gentle aperients, (ſee Emollient, and aſtringent Aperients, under Cathartics, page 265.)---but if in too advanced a ſtate, when the fever is completely formed, which is almoſt always the caſe, it will purſue its courſe in ſpite of all our endeavours.

The indications of cure are to guard the habit ſo far, that the worſt effects may be prevented; and, as in inflammatory fevers, we endeavour to weaken the ſyſtem, we muſt in this attempt to invigorate the conſtitution, and ſupport it by mild and proper cordial ſtimulants, not given at firſt of too powerful a nature.

Bleeding,

Bleeding, apt to be applied on ſlight occaſions, is here almoſt always injurious, no diſeaſe bearing that operation ſo badly. At the attack, we ſhould wait for nature pointing out the preciſe diſpoſition of the malady. Sometimes, indeed, in ſome epidemic conſtitutions of the air, when at the commencement it attacks habits which are full of blood, putting on the appearance of inflammatory affection, a few ounces may be taken away, but not repeated.

Where there ſeems to be a determination of blood to the head, diſcovered by pain, heavineſs, and giddineſs there, as ſometimes happens, leeches may be applied to the temples; or cupping at the back part of the head may be had recourſe to; but not on trivial occaſions.

There are ſome ſymptoms which ſhew themſelves, ſuch as difficult and oppreſſed breathing, and are called peripneumonic; but theſe ariſe not from an inflammatory cauſe; as the breath is not hot, nor is there any cough, nor different degrees of pain; but the pulſe is ſmall and contracted, and the extremities cold---theſe ſhew the affections to be nervous, not vaſcular;—bleeding would therefore be highly injurious. From their local, as well as general effects, mild emetics are certainly uſeful, from unloading the ſtomach of any viſcid materials, and giving an opportunity for medicines to communicate their effects to the habit and nervous ſyſtem more freely, by having the internal coat of that organ more openly expoſed to their action---and here ipecacoanha is preferable to tartarized antimony, as it

weakens leſs the influence of the nervous ſyſtem. (No. 38.)

The body ſhould be kept open by gentle aperients (265) *only*, as common purges at the onſet have produced ſinking of the ſpirits, faintings, and other diſtreſſing ſymptoms—or domeſtic glyſters, (No. 25.) may be adminiſtered, in caſe of coſtiveneſs, every ſecond or third day.

Bliſters applied through the whole courſe of the diſeaſe, ſucceeding one another, with moderately cordial and diaphoretic medicines, (No. 27 to 29.) and a well-regulated diet, are what muſt be chiefly depended upon; for theſe diſſolve the viſcidity of the ſerum, invigorate the ſyſtem, and render the nerves more uniform and powerful in their action---hence promote inſenſible perſpiration, or a gentle moiſture on the ſurface of the body; but they ſhould not be puſhed ſo far as to induce profuſe ſweating, for a continued ſweat exaſperates the fever.

To the diet we ſhould be particularly attentive, in order to ſupport the ſtrength of the patient; for theſe fevers are apt to be of long duration; and this ſhould be of the ſtimulant, cordial, and nutritious kind---of which the ſick ſhould be ſolicited to take frequently in moderate quantity.

White wine whey, thin gruel with wine in it, may be uſed freely, or wine and water---and particularly towards the termination, chicken broth, beef-tea, thin jellies of hartſhorn, ſago, and panada with wine. Indeed wine alone may be liberally adminiſtered, eſpeci-

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cially if the pulſe grows ſoft upon its uſe, if there ſhould be lowneſs, with a ſoftneſs of the pulſe, and a low drowſy delirium; for under theſe circumſtances it produces ſleep. I have known patients, particularly one lady, take three pints in 24 hours with advantage; but it has been affirmed, ſome quarts have been given in the ſame ſpace of time.

All the liquids, if deſired, may be drank cold, as they are only neceſſary to be prohibited in caſes of local inflammation.

There is little doubt but a judicious and well-regulated diet, with the uſe of bliſters, well-timed and well-applied, will perform a cure---taking care to keep the patient as quiet as poſſible both in body and mind---He ſhould be kept only of a moderate warmth, neither expoſed to too great heat or cold; and his ſpirits exhilirated as much as poſſible, by conſolatory converſation of his medical attendants, and certain promiſes of recovery, diſſipating all gloomy or unpleaſant ideas.

With regard to the application of bliſters, ſo great appears to be their uſe, that ſome neceſſary rules ſhould be pointed out.---They ſhould certainly, in order to reap the greateſt benefit, be applied at firſt, as ſoon as we know the preciſe nature of the malady; but if neglected till the ſyſtem manifeſts high degrees of incitability, diſcoverable from acuteneſs of ſight, touch, and hearing; they muſt be omitted till ſome degree of inſenſibility makes its approach---for, *in the firſt inſtance*, they may prevent the acceſſion, or alleviate the violence of the ſymptoms---*in the ſecond*, they would increaſe them before the period ſtated.

As the bliſters are only applied to promote ſtimulus, not any evacuation, becauſe that would tend to debilitate the ſyſtem, and be of diſſervice; therefore, as ſoon asthe bliſter is fully raiſed, it ſhould be cut, the aqueous fluid let out, and nothing applied to the part to increaſe the diſcharge. In the firſt inſtance, ſome have adviſed them to be put upon the legs; but, in caſe of drowſineſs and ſtupor, upon the head, and ſinapiſms to the feet; to which ſhould the laſt give too great pain, they may be changed for poultices of milk and bread.

In order to relieve the peripneumonic ſymptoms, (339.) bliſters to the arms, thighs, or legs are proper, with gentle cordial medicines, (No. 13 to 15.) with the addition of acetated ammonia, or the cordial ſaline draught, (No. 27.) may be adminiſtered, cordial mixtures or julep occaſionally, (No. 13, to 15. 28, 29.) or ſal volatile, from 20 to 40 drops in muſtard whey.

After the continuation of this fever for ten or twelve days, or longer, ſhould a remiſſion come on; that is, ſhould it at times appear to abate much of its violence, and then come on again---or ſhould ſweats too much exhauſt the patient, Peruvian bark, adminiſtered with cordials, is highly proper, in ſuch forms as the ſtomach will beſt bear, either infuſed in wine, in decoction, or infuſed only in hot or cold water, (No. 39 to 49.)—though the firſt form is eſteemed the beſt, ſometimes it is more agreeable to the ſtomach in ſome other mode.

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In the declenſion of this fever, where the remiſſion or intermiſſion was very diſtinct, Huxham gave the bark conjunctively with the ſaline draught, and found it more efficacious.

Bark alſo tends to prevent or check mortifications, which ſometimes come on from preſſure by long lying, bliſters, or ſinapiſms.

In caſes of tremblings, twitching of the tendons, and convulſions, muſk, in doſes, according to the violence of the ſymptoms, and mixing it with valerian, as adding to its efficacy, (No. 31 to 35.) are beneficial.

In caſes of looſeneſs during the courſe of the complaint, if moderate, they may not be dangerous; ſtill if profuſe, they ſhould be checked, though not entirely ſtopped—they may be moderated by ſlight doſes of rhubarb and opiates, or abſorbent or aſtringent juleps. (No. 42, 43.) The white decoction and red wine will be a proper drink.

Or, we may endeavour to promote gentle ſweat, in order to divert the fluids to the ſkin, by mild opiates, as camphorated tincture of opium, from twenty to forty drops, or the opiated confection, from one ſcruple to half a dram to a doſe, may be added to any of the cordial mixtures, (No. 13 to 15. 28, 29.) and given as directed in the abſorbent juleps.

And, laſtly, if aphthæ, or thruſh, ſhould come on, attended with ulcerations of the throat, here detergent gargles are uſeful, (No. 44 to 47.) and gentle emetics, (No. 11, 12. 38.) But if ſwallowing is nearly obſtructed by a quantity of viſcid phlegm, ſtronger may

be adminiſtered, which will be formed by increaſing the doſe of ipecacoanha, or tartarized antimony in each.

Though, ſhould a ſalivation come on without aphthæ, and that pretty freely, Dr. HUXHAM conſiders it, as it really is, a favourable ſign—for, ſays he, "when this "happens, with a kindly moiſture of the ſkin, I never "deſpair of my patient, however weak or ſtupid he "may ſeem."

As there ſeems to be ſo much danger in this fever, from the very beginning to the termination, it may afford ſome benefit to be acquainted with thoſe ſymptoms which may give us flattering hopes; and to know thoſe from whoſe appearance we may be enabled to prepare ourſelves for the fatal cataſtrophe.

If the delirium ſhould be ſlight, no great debility—if the pulſe ſhould, upon the adminiſtration of cordials, become more full; and about the termination of the diſeaſe, a gentle ſweat or looſeneſs, but particularly a ſalivation without aphthæ, come on—if any tumors appear about the ears—and a miliary eruption ſhews itſelf, without any profuſe ſweat having preceded, we may have reaſon to expect *a favourable concluſion*—but if a ſtrong delirium ſhould continue above four days—if there ſhould be copious evacuations—a profuſe unſeaſonable ſweat from the cheſt, head, and neck—the feet and legs only more dry and cold—twitching of the tendons---trembling of the hands and tongue---a colliquative or diſſolving looſeneſs---with a weak pulſe---loſs of ſight---and impeded deglutition, accompanied with

with an hiccough---ſhould the hands grow cold—the fauces livid---blood flow from the veſſels---and ſpots like flea-bites appear---there can remain little hope of eſcaping the moſt fatal conſequences.

With reſpect to a deafneſs coming on, it has been conſidered by ſome as a favourable omen, by others the reverſe; at beſt it is but of dubious import, and not to be depended upon; for from experience I can ſpeak, that I have ſeen it an attendant ſymptom on both death and a recovery.

§. 4. PUTRID, OR SANGUINEO-PUTRESCENT FEVER.

Which term I think applicable, becauſe the maſs of blood appears to be materially and principally concerned in this fever—for in thoſe of which we have before treated, the chief diſturbance has been created primarily in the vaſcular and nervous ſyſtem.

But it may be aſked, how comes it that this fever ſometimes begins its attack with ſtrong ſymptoms of an inflammatory, at others of a nervous, fever? This variation happens moſt likely in its different degrees, adequate to the firmer or looſer coheſion of the particles of blood.

For if putrid matter was to be generated in, or abſorbed into the habit, whoſe blood was of a firm texture, and vaſcular ſyſtem had proper tenſion, it would be longer before indications of abſolute putridity having taken place in that conſtitution would preſent themſelves, than if the nervous ſyſtem had been in a

ſtate

ſtate of relaxation, and the blood thin and poor. There can be little doubt of this fact---and that this deviation is owing entirely to the nature of one conſtitution being able to reſiſt the effects of the putrid cauſe longer than the other. And, indeed, if we conſider that thoſe whom experience has pointed out to us moſt ſubject to this diſeaſe are, the infirm; ſuch as labour ſeverely, and live in a ſtate of poverty; the luxurious and indolent; the penſive and melancholic; thoſe who ſit up late; thoſe of cold phlegmatic conſtitutions; we ſhall need little other confirmation of our aſſertion.

DESCRIPTION. Here we ſhall firſt enumerate the general catalogue of ſymptoms, and then ſpecify ſuch as beſpeak its commencement; in order, as early as we can, to be enabled to diſtinguiſh this fever from the two foregoing, as ſucceſs greatly depends upon this knowledge; they requiring eſſential deviations in ſome reſpects in our modes of cure---for the accompliſhing of which much depends on the method of treatment at the onſet.

In this fever the *heat* of the body is intenſe, remittent, and gives a ſmarting ſenſation to the fingers of thoſe who apply the hand to the ſkin of the ſick, though at firſt not ſo great as in inflammatory fevers, ſtill daily increaſing—the *pulſe* intenſe, ſmall, and unequal—there is a *pulſation of the arteries*, which run up into the head through the neck into the brain, and thoſe of the temples—*extreme weakneſs* and *proſtration of ſtrength*, and that very often ſudden—the patients are *dejected*, and *forebode the worſt conſequences*—they

are oppreſſed with *nauſea*, and *vomiting* of dark-coloured bile—*pain of the head* and *temples*—have their *eyes inflamed*, *full*, *heavy*,—and a fixed pain, often ſevere, over both *eye-brows* and *at the bottom of the ſocket*, *or orbit*—their *complexion* of a dingy hue—a ringing in *the ears*—their *breathing* is difficult, interrupted by ſighing—and the *breath* ſtrong, or fœtid—they are troubled with *pains in the ſtomach*, *back*, *and limbs*—they lie down with uneaſineſs—tremble—are delirious—the *tongue* at firſt is white, afterwards black and dry—the *lips* and *teeth* covered with a thick foul ſordes—the *blood* livid, much broken, or very weak in its texture, and quickly runs into a putrid ſtate—their *thirſt* inſatiable, attended with a bitterneſs of the *mouth*—the *urine* in the beginning is of a pale colour, but in progreſs of the diſeaſe very red, nay ſometimes black, dropping down a dark-coloured ſediment like ſoot—the *ſweats* are fœtid, and frequently appear tinged with blood—the *ſtools* ſmell offenſively, are ſometimes livid, black, or bloody—ſmall *livid ſpots*, like flea-bites, called petechiæ, and, if broader, vibices, make their appearances—alſo hæmorrhages, aphthæ, ulcerations of *the fauces*, and hiccough, and fœtid, ſanguinary, dyſenteric affections, probably from internal ulceration and mortification, determine haſtily the fate of the patient.

CAUSES. Thoſe which are *remote* or *inducing* are ſaid to be, feeding too much on animal food, particularly fiſh—eating conſtantly, as the ſailors do, ſalted, and half corrupted fleſh, and drinking putrid water—being in habits of taking alkaline, fixed, and volatile

ſalts,

ſalts, and aloes—corrupted fruit—moiſt ſoutherly winds, attended, or rather preceded by great heat—vapor of ſtinking waters—or from fens nearly dried—or from putrid animal or vegetable ſubſtances—the ſtagnant and foul air of hoſpitals, ſhips, priſons, and workhouſes—feeding on corrupted grain—contagion—or any kind of putrid effluvia---for theſe diſpoſe the fluids to become putreſcent.

Thoſe which are fixed to be the *proximate or immediate cauſes*, are, a putrid diſſolution of the humours, particularly of the red particles, as we have a right to conclude from the effect of putrid ferments diſſolving and breaking down the texture and tenacity of ſolid and fluid ſubſtances wherein it takes place.

Not only from the ſymptomatic appearances of this diſeaſe have we reaſon to be apprehenſive of the moſt fatal conſequences in general, but we ſhall be further confirmed, on the diſſection of thoſe who die of it, which ſhews the brain and viſcera, particularly the ſtomach and inteſtines, in an inflamed, and often in a mortified ſtate.

CHARACTERISTIC SIGNS. In order to diſtinguiſh the putrid fever in its earlieſt attack, or very ſoon after, we muſt obſerve, that the degrees of *debility, oppreſſion, and nauſea are more conſiderable* than in any other fever: the *proſtration of ſtrength ſudden and violent* has for its aſſociates *extreme deſpondency*, or *inſenſibility*, and *want of apprehenſion* to an uncommon degree, which beſpeaks great danger.

The *loſs of appetite*, or *loathing of food, ſickneſs, languor*, and *dull pain of the head*, ſimilar to what happens

pens in the two former fevers before deſcribed, which attend, when it comes on, as it ſometimes does gradually, *are in the beginning always more ſevere and ſudden than in the inflammatory, though ſeldom ſo much ſo as in the nervous fever.* Beſides, the ſmallneſs of the pulſe, the dejection of ſpirits, the broken texture of the blood, the purple ſpots, and putrid ſtate of the excrements, diſtinguiſh it *from the inflammatory fever.* The degree of heat, the very high-coloured urine, the thirſt, the ſpots, and putreſcency, *from the nervous fever:* And its formation is rendered perceptible by coldneſs and ſhivering, which has for its aſſociates nauſea, vomiting, giddineſs, confuſion of the head, extreme and ſudden proſtration of ſtrength.

CURE; The indications of which are, to endeavour to ſupport the ſtrength, counteract the putreſcent acrimony, and regulate the actions of the nervous ſyſtem, by giving ſtrength and activity to the debilitated fibres, correcting the putrid ſtate of the fluids, and promoting the diſcharge of morbid matter.

And under ſome circumſtances, bleeding in this fever at the beginning has been adviſed, where it has attacked robuſt conſtitutions full of blood; and here, perhaps, once it may be right; but not without the ſymptoms run to an alarming height, would I adviſe the operation; and then only in order to prevent the fatal effects which might be induced by the violence of ſome of them: for, though the pulſe ſhould be at firſt full and ſtrong, on taking away blood it ſoon ſinks, and ſometimes ſo much, that we labour in vain afterwards to get it raiſed. Without, therefore, we have

evident

evident ſigns of an inflammatory ſtate of the blood, and that the brain, lungs, or ſome other of the vital parts are threatened with inflammation, we ſhould never bleed---and, under the above circumſtances, then *only in the beginning* ſhould a few ounces be taken away, merely as an alleviator of a dangerous ſymptom.

Afterwards the firſt paſſages are to be cleared from their contents by gentle emetics, (No. 11.) giving ſmall doſes of antimonials, and theſe repeated every ſecond hour, (No. 6 to 9.) For wherever the ſymptoms, which ſeem to indicate the uſe of the lancet, are violently urgent, *they alone* are the ſafeſt applications. But we ſhould be careful not to occaſion profuſe diſcharges, which may produce too great lowneſs. If the antimonials cauſe not two or three ſtools, a gentle aperient may be given, (No. 22 to 24---49 to 51.) or glyſters, (No. 25, 26.) which may be repeated every third day.

Theſe things being premiſed, our chief dependence is on ſuch medicines as give ſtrength and power to the ſyſtem, and ſome of thoſe called antiſeptics, or correctors of putreſcent acrimony, (Page 299, 300, 301.) (No. 39 to 41, and 52 to 54.) particularly thoſe fruits which have ſweetneſs coupled with acidity, (Page 299.) ---the antiſeptic whey, (No. 48.)---fermented, or mineral acids, (Page 300.)---camphor, (Page 229. No. 15. 54.)---and bark, (No. 39 to 41. 53. Page 300.) particularly, which has been known to produce aſtoniſhing effects in a highly-diſſolved ſtate of the blood, where hæmorrhages have from that cauſe been produced. With theſe medicines we ſhould begin, as ſoon

as

as ever we perceive the diſſolution of the blood has taken place, from the appearance of purple ſpots or hæmorrhages; not waiting, as in other malignant fevers, for any remiſſion; for it is on bark, camphor, and wine we muſt chiefly depend for ſucceſs in theſe caſes, coupled in ſome of hæmorrhages with aſtringents; to which we ſhall ſoon advert.

I would not adviſe, as in the caſes of nervous fever, the uſe of ſtimulants in conjunction with bark, (No. 40, 41.) but where the nervous ſyſtem appears to be extremely torpid; then, I think, they give great power to that, and render it more active; for I am fully perſuaded, that it produces its good effects, by giving firmneſs to the ſolids, equability of action to the moving powers, preventing the effects of putrid diſſolution, and enabling them to ſeparate and throw off the morbid materials, rather than correcting the acrimony, or preſerving the texture of the blood by any other means. And this ſeems in a great degree to be corroborated by the opinion of HUXHAM, when ſpeaking of theſe fevers, whoſe practice in theſe complaints was very conſiderable, ſays, "Though nature very frequently affects to diſcharge the morbific matter in "putrid malignant fevers by vomits and ſtools, yet "her more conſtant efforts are through the pores of "the ſkin;—and I ſolemnly aſſert, I never ſaw theſe "fevers completely carried off till more or leſs of a "ſweat enſued; if it proves moderately warm, and "equally diffuſed over the whole body; if it comes "on about the ſtate of the diſeaſe, and the pulſe grows "open, ſoft and calm a little before, and during its

"continu-

" continuance; but if very profuſe, cold, clammy, or " partial about the head or breaſt only, we have much " more reaſon to fear than to hope from it. If pro- " fuſe ſweats break out in the beginning, they are ge- " nerally pernicious, ſhould a fever ſupervene."

Under the circumſtances recited above, though bliſters are ſaid not to be uſeful in the beginning, becauſe the nervous ſyſtem ſhews no ſigns of torpor; yet are they often ſucceeded with happy effects, when people become ſtupid, drowſy, and inſenſible; and, indeed, at any time, if the pulſe is very low, the urine and excrement paſs off involuntarily, which I have obſerved in an early ſtage.

Wine, as it is an univerſal cordial, ſo it is the beſt, which may be given liberally; amongſt the moſt eligible of which are claret, red port, and old rheniſh; or, where they cannot be had, from their dearneſs, ale or porter may be uſed. As for *food*, gruel, panada, ſharpened with orange or lemon juice, roaſted apples, fruit of all kinds—for *drink*, the wines above mentioned mixed with water, lemonade, orangeade, wine wheys of different ſorts, apple water mixed with wine, vinegar whey, old ſound cyder, and all thoſe liquids of an aceſcent nature, or which correct putreſcency, ſhould be indulged in.

The room in which the ſick is confined ſhould be well ventilated, vinegar ſprinkled on the beds, and round the room, freſh flowers and aromatic herbs ſtrewed about; the patient ſhould have clean linen often renewed, and the ſtools be removed as early as poſſible, whether they paſs voluntarily or otherwiſe;

for

for nothing refreſhes the ſick more than cool air and cleanlineſs.

By the means here generally deſcribed we ſhall commonly ſo aſſiſt and invigorate the conſtitution, as to enable it to throw off the more morbid matter, which is done by various ways, but moſt frequently by ſweat, to aſſiſt in which operation, CAMPHORATED VINEGAR is ſtrongly recommended, (No. 55.) but, if joined with an opiate, HUXHAM ſays, it is the moſt certain ſudorific in nature—the ſolution though, by itſelf, promotes perſpiration and gentle ſweat more certainly than any other medicine; beſides, where mild ſtimulants are neceſſary, it heats leſs than volatiles or ardent ſpirits.

Nature ſometimes contrives the mode of expulſion for the morbid matter by the bowels, hence a diarrhœa, which, if attended with breathing ſweats, or a warm moiſture upon the ſkin, is always ſerviceable, and we may flatter ourſelves that this is a ſucceſsful effort.

At others, ſhe relieves the habit by abſceſſes, formation of matter in different glands, (Page 12.) ſuch as thoſe under the ear, the arm-pits, or groin; or, by throwing down highly acrimonious and corroſive humours into the legs, about the hips, or moſtly the lower part of the back, aſſiſted in this effort by continually lying—hence is mortification of the integuments induced, forming thick ſloughs, which leave deep, ſpreading ulcers, from a ſupply of a corroſive fluid called ichor. Here we muſt rely chiefly on Peruvian bark, to produce, by its invigorating power, a ſeparation of the parts mortified.

But ſometimes, whilſt we are exerting ourſelves to promote every good purpoſe, by a plan judiciouſly conceived, and well ſelected applications, ſome accidental occurrences will ariſe in different parts, which, if neglected, or injudiciouſly managed, will fruſtrate our intent, and every effort of nature. Whatever, therefore, threatens to ſink the patient, or diſturb nature's general operations, muſt be, if poſſible, checked, or totally ſubdued.

Should a *hæmorrhage*, as ſometimes happens, come on, vitriolic acid may be added to the bark decoction, (No. 53.) or it may be given with any other vehicle, or the common drink may be acidulated with it, and given pretty freely. Should not theſe ſucceed, alum, or alum-whey may be added, (Page 210.) or given in powder. (No. 56.)

Should a *profuſe diarrhœa* make its appearance, and give us leave to ſuppoſe that the conſtitution by this means would be enfeebled, it muſt be reſtrained only gradually; for if we lock up the matter ſuddenly, without ſupplying ſome other more gentle mode of paſſage out of the machine for the corrupted fluid, internal miſchief might be occaſioned in the inteſtines, by the irritation it would there produce.

We muſt therefore endeavour to determine the fluids to the ſkin, by ſome well-adapted diaphoretics, (No. 57, 58.) and, at the ſame time, ſhould the ſtools continue copious, and extremely fœtid, glyſters of fixable air, with which ſome mild watery antiputreſcent liquid is impregnated, or fixable air may be thrown up alone,

alone, for this is a powerful corrector of putreſcent acrimony, and would take off the ſtimulus of thoſe veſſels which pour out their contents into the bowels, called exhalent, and render the medicines given more effectual in puſhing forwards, or ſoliciting the humours to the ſkin.

Sometimes there will occur *violent vomiting*, which in this fever is not unuſual.

This ought to be reſtrained, and generally our ſucceſs in the attempt will be pretty certain, by giving the ſaline draught in a ſtate of fermentation. (No. 59.)

By the means of this the offenſive and foul matters in the ſtomach, and flexure of the duodenum, (43.) are ſuppoſed to be corrected, and thus, by removing part of the fomes, (that is, matter which created the uneaſy ſenſations of the ſtomach, and was a means of ſupporting the febrile affections) of conſequence leſſen the nauſea, and other ſymptoms indicative of its preſence, as well as, in all probability, ſhorten the duration of the fever.

Another peculiar accident may happen, though perhaps very rarely, which we ought by all means to be guarded againſt. Bark, upon which we in this fever place ſuch dependance, will not agree with all conſtitutions, decoction of pomegranate bark, and chamomile flowers, may ſupply its place, and is ſaid to anſwer every purpoſe. (No. 60.)

Though it may be ſometimes the caſe that bark will not agree with our patients in the common modes of adminiſtration, ſtill I have never found but in ſome of its forms it may be made to anſwer every purpoſe.

By beginning with the cold infuſion, and gradually increaſing its power, I have been enabled to adminiſter

it in all its complicated forms, and produced its deſired effects.

Eruptions of different colours, red, purple, black, dun, or greeniſh, called petechiæ, ſtrike out ſometimes toward the cloſe, or earlier, of different ſizes; but theſe ſeldom bring any relief from oppreſſion, ſickneſs, or other diſtreſſing ſymptoms--the redder they are the better--and it is a favourable ſign where thoſe which are of a black or violet colour become of a brighter colour; for theſe coloured ſpots beſpeak a high degree of putreſcent acrimony, and activity, bringing on a dangerous ſtate of ſanguinary diſſolution—ſo the change of colour to that which is moſt favourable, ſhews the degree of miſchief leſſening, and their cauſes growing weaker.

About the eleventh or fourteenth day, *miliary eruptions* with a white appearance break forth; ſometimes ſucceeding profuſe ſweats, which not unfrequently happen at this time. Theſe ſeldom relieve; but if there appears a red, ſmarting, itching raſh, or large, fretting watery bladders, they are ſerviceable. But we may have hopes of recovery from the breaking out of a ſcabby eruption about the noſe, lips, and corners of the mouth—the more angry and hot it is, the more favourable the omen. To theſe we may add, if the ſymptoms are mild—if a looſeneſs or fœtid ſweat ſhould break out at the decline of the diſeaſe, there is conſiderably leſs danger, than where there is no thirſt—the fauces inflamed—a large crop of black eruptions, which ſuddenly recede—a laborious reſpiration after their eruption—a ſwelling of the belly with looſeneſs—fœtid and ichorous ſtools—coldneſs of the extremities—

and convulſions—for theſe afford moſt calamitous portents.

Indeed, with regard to the aphthæ or thruſh, of whatever colour, they carry along with them no pleaſing omen, when they break out on the inſide of the mouth—for they are ſoon ſucceeded by putrid ulcerations of the throat, &c. bringing along with them difficulty of ſwallowing, and hiccough, in the firſt inſtance—afterwards, fœtid, bloody, and dyſenteric evacuations, probably from ulceration and mortification of the inteſtines.

But when patients have fortunately paſſed the ſtage of fatality, they often become dropſical, or have watery ſwellings in their legs, we muſt not, under theſe circumſtances, depend on purgatives to evacuate the watery fluid, as in other dropſies—but bark, (Page 300.) ſteel, and the natural chalybeate waters, (Page 210.) to ſtrengthen and invigorate the vaſcular ſyſtem, and promote abſorption. (No. 61, 62.)

But, in order to prevent a relapſe when the criſis is perfected, from putreſcent or offenſive matters accumulating in the firſt paſſages, a gentle purgative or two, (No. 3. 19, 20, 21.) is abſolutely requiſite—and a courſe of aromatic bitters, joined with chalybeates, (No. 63, 64, 65.) or ſome of the chalybeate waters, (Page 210.) with light, nutritious, eaſily digeſtible food. (Page 324.)

And here we muſt obſerve, that where we find any prevailing acid upon the ſtomach, we would adviſe ſteel to be given in ſubſtance—where not, ſome of the chalybeate ſalts, of which the tartarized iron,

(Page 210.) is ſuppoſed by ſome to be the beſt, and may be given inſtead of vitriolated iron—and it is ſaid to have proved efficacious where all the others have failed: and is more ſoluble in the animal fluids.

The medicines above preſcribed, or ſome others of the ſame kind, are thought neceſſary, in order to recover the tone of the viſcera, and enable the digeſtive powers to aſſume their wonted power—which being neglected, a foundation may be laid for chronic complaints, by the conſtitution's being loaded with acrimonious and ill-conditioned humours, and ſubjecting the patient to jaundice, dropſies, conſumptions, or ſome ſuch ſimilar miſchief.

We have now finiſhed our accounts of ſimple fevers: and as we conſider all the others, whatever their appellation, to belong to one of the foregoing, ſimply, or conjointly, we ſhall be under the neceſſity of having recourſe to ſome of the modes of cure, here ſpecified, in all; and have therefore choſen here to add the forms of medicines made uſe of in theſe fevers, referring in the body of the work, occaſionally, to the more general catalogue, that our readers may be ſupplied with a larger number of materials, from whence he may make his own ſelection.

Beſides, he will, by cloſely ſtudying theſe, be enabled to ſee the nature of medicinal combination; and will have the way paved for his more readily underſtanding the management of fevers in a more complicated ſtate.

Nevertheleſs,

Nevertheleſs, notwithſtanding we think the remedies here ſupplied are ſufficient for enabling the practitioner to be as uſeful as poſſible in all febrile affections, we ſhall make occaſional additions in each, where any circumſtances of advantage preſent themſelves, either from their peculiarity, or any local affections with which they may be combined.

THE

FORMS OF MEDICINE

PRESCRIBED AND REFERRED TO IN THE

SIMPLE CONTINUED, INFLAMMATORY, NERVOUS, AND PUTRID FEVERS.

No. 1. Saline Mixture.

Take Kali prepared,	1 dram.
Lemon Juice,	2 ounces 2 drams.
Diſtilled or boiled Water,	5 ounces.
Sugar,	2 drams.

Mix.—Dose. Four table ſpoonfuls every two or three hours.

2. Nitrous Powder.

Take Nitre powdered,	6 or 10 grains.
Crabs Claws prepared,	20 grains.
Sugar,	30 grains.

Mix—and take it in the manner above recited.

3. Cooling Saline Purge.

Take Milk of Almonds, or Decoction of Barley,	10 ounces.
in which diſſolve	
Vitriolated Natron,	1½ ounce.

or Tartarized Natron,	1 ounce.
or Vitriolated Kali,	½ ounce.
Manna,	1 ounce.

Dose. Four table ſpoonfuls every third hour, till the deſired effect is produced.

No. 4. Anodyne, or Quieting Draught.

Take Diſtilled Water,	1½ ounce.
Spirit of vitriolic Æther,	30 drops.
Tincture of Opium,	15 drops.
Syrup of White Poppy Heads,	2 drams.

Mix.—

or,---5. Saline Anodyne Draught.

Take Kali prepared,	10 grains.
Lemon Juice,	2 drams.
Diſtilled Water,	1 ounce.
Tincture of Opium,	15 drops.
Syrup of White Poppy Heads,	2 drams.

Mix.—

6. Antimonial Mixture.

Take of tartarized Antimony,	3 grains.
Roſe Water,	6 ounces.
Syrup of Sugar,	3 ounces.

Mix.—Dose. One or two ſpoonfuls every ſix or eight hours.

or---7. Antimonial Powder.

Take Tartarized Antimony,	3 grains.
Prepared Crabs Claws,	5 drams.
Sugar,	1 dram.

Dose. Twenty or thirty grains.

8. Antimonial Saline Mixture.

Take Saline Mixture, (No. 1.)	8 ounces.
Tartarized Antimony,	1½ grain.

Dose. Four table ſpoonfuls every fourth or fifth hour.

or---9. Antimonial Bolus.

Take Antimonial Powder,	3 grains.
Conſerve of Roſes,	½ a ſcruple.

Syrup of Sugar, ſufficient to form a bolus, which may be repeated every ſixth hour—or the Antimonial Powder may be given with ſome of the abſorbent Earths, as in No. 7. and the dose of Antimonials may be augmented or decreaſed as the ſtomach will bear them.

No. 10. Neutral volatile Saline Mixture.

Take Acetated Ammonia,	2 ounces.
Peppermint Water,	6 ounces.
Tartarized Antimony,	1 grain.
Syrup of Saffron,	½ an ounce.

Mix.—Dose, &c. ſimilar to No. 1.

11. Emetic Mixture.

Take Tartarized Antimony,	6 grains.
Diſtilled Water	6 ounces.
Syrup of Saffron,	½ an ounce.

Mix.—Dose. Two table-ſpoonfuls, repeated every half hour, till the deſired effect is produced.

or---12. Emetic Draught.

Take Ipecacoanha Powder,	20 grains.
Tartarized Antimony,	1 grain.
Pennyroyal Water,	1 ounce.
Syrup of Saffron,	1 dram.

Mix.—Let this be adminiſtered in the evening, and the ſtomach well waſhed with chamomile-flower tea, thin gruel, or any other ſimple aqueous fluid drank warm.

13. Cordial Mixture.

Take Peppermint Water,	6 ounces.
Spirit of Nutmeg,	1 ounce.
Aromatic Confection,	1½ dram.
Compound Spirit of Ammonia,	40 drops.
Syrup of Saffron,	½ an ounce.

Mix.—

or---14.

Take Cinnamon Water,	6 ounces.
Spirit of Cinnamon,	1 ounce.
Ammonia prepared,	30 grains.
Aromatic Confection,	1 dram.
Compound Spirit of Lavender, Syrup of Saffron,	of each ½ an ounce.

Mix.—

15. Cordial camphorated Julep.

Take Camphorated Mixture, Peppermint Water,	of each 3 ounces.
Tincture of Cinnamon,	1 ounce.
Syrup of Saffron,	1½ ounce.

Mix.—Doses. Four table ſpoonfuls every fourth or fifth hour; and three at any time, when low, faint, or ſick.

No. 16.

No. 16. Cordial stimulant Bolus.

Take Prepared Ammonia, Camphor, } of each 5 grains.
Aromatic Confection, 10 grains.
Syrup of Saffron, sufficient to form a bolus.

or---17.

Take Snake-root, Contrayerva, } powdered, } of each 5 grains.
Aromatic Confection, 10 grains.
Syrup of Saffron, sufficient to form a bolus, to be administered every four hours, washing it down with two or three tablespoonfuls of the following julep.

18. Cordial Julep.

Take Cinnamon Water 6 ounces.
Tincture of Cinnamon, 1 ounce.
Syrup of Saffron, ½ an ounce.
Mix.—

19. Purging Draught.

Take infusion of Senna, 2 ounces.
Manna, Tincture of Senna, } of each ½ an ounce.
Rhubarb in powder, 8 or 10 grains.
Compound Spirit of Lavender, 2 drams.
Mix.—

or---20.

Take Rhubarb, Jalap, } in powder, 25 grains. 6 grains.
Cinnamon Water, 1 ounce.
Syrup of Orange-peel, 1 dram.
Mix.—

21. Purging Pills.

Take Rhubarb in powder, 30 grains.
Mucilage of Gum Arabic, sufficient to form it into pills—or syrup may be added to make it into a bolus.

Any of these forms may be taken in the morning early; and when they begin to operate, worked off with weak broth, or thin gruel.

22. Cassia Draught.

Take Distilled Water, 1½ ounce.
Acetated Ammonia, 2 drams.

Tartarized

Tartarized Antimony,	$\frac{1}{6}$ or $\frac{1}{4}$ of a grain.
Caſſia Electuary,	from 10 to 20 grains.
Syrup of Roſes,	2 drams.

Mix.—and let it be repeated once in four hours, till it produces the effect required.

No. 23. Crystals of Tartar Whey.

Take Cryſtals of Tartar,	$\frac{1}{2}$ an ounce.
diſſolve them in	
Milk,	$\frac{1}{2}$ a pint.
and add Manna,	2 ounces.

24. Infusion of Tamarinds.

Take Tamarinds,	1 ounce.
boil them in Milk Whey,	8 ounces.
then add Manna,	2 ounces.

Of each of theſe a tea-cupful, or more may be taken occaſionally.

25. Domestic Glyster.

Take Milk, Water,	of each 4 ounces.
Brown coarſe Sugar,	$1\frac{1}{2}$ ounce.
Common Salt,	$\frac{1}{2}$ an ounce.
Linſeed, or Olive Oil,	2 ounces.

Mix.—

26. Common Glyster.

Take the Glyſter Decoction,	8 ounces.
Epſom Salt, Syrup of Buckthorn,	of each 1 ounce.
Linſeed Oil,	2 ounces.

Mix.—

27. Cordial Saline Draught.

Take acetated Ammonia,	$\frac{1}{2}$ an ounce.
Peppermint Water,	1 ounce.
Ammonia prepared,	5 grains.
*Confection of Alkermes,	20 grains.
Syrup of Saffron,	2 drams.

Mix.—

28. Cordial aromatic Draught.

Take Oil of Nutmegs,	4 drops.
rub them well with	
Sugar,	2 ſcruples.
to which add gradually	
Peppermint Water,	2 ounces.

Mix.—

* Lewis's Diſpenſatory improved. Page 363. Edinburgh, 1786.

No. 29. Cordial Aromatic Mixture.

Take of Oil of Cinnamon, 40 drops.
Fine Sugar, 3 drams.
rub theſe well together, then add
Cinnamon Water, 6 ounces.
Spirit of Cinnamon, 1 ounce.
Mix.—The Draught, or four ſpoonfuls of the Mixture, ſhould be given as directed No. 15.

30. Mustard Poultice.

Take Muſtard Seed Powder, } of each equal parts.
Crumbs of Bread, }
Strong Vinegar, ſufficient to form a poultice; but when wiſhed to be ſtronger, half an ounce of bruiſed Garlick, and one ounce of black Soap are added.

31. Musk Bolus.

Take Muſk, from 8 to 30 grains.
rub them well with
Fine Sugar, 40 grains.
to which add,
Ammonia prepared, 5 grains.
Aromatic Confection, 10 grains.
Syrup of Saffron, ſufficient to form a bolus, to be adminiſtered every four or five hours, with three table-ſpoonfuls of the ſubſequent Infuſion.

32. Valerian Julep.

Take Valerian Root bruiſed, 1½ ounce.
Boiling Water, 1 pint.
Infuſe in an earthen veſſel well cloſed, and let it ſtand till cold; to ſix ounces of which add Syrup of Saffron, half an ounce.
Mix.—

33. Camphorated Bolus.

Take Camphor, } of each 5 grains.
Ammonia prepared, }
Aromatic Confection, 20 grains.
Syrup of Saffron, ſufficient to form a bolus, to be taken every fourth hour.

34. Musk Julep.

Take Muſk Mixture, 6 ounces.
Camphor, 30 grains.
Myrrh, 20 grains.
Syrup of Saffron, ½ an ounce.
Let the Camphor and Myrrh be well rubbed together, and then add gradually the Muſk mixture——Dose. Four table-ſpoonfuls every three or four hours, or oftener in caſes of great languor.

No. 35. Musk Bolus.

Take Muſk, 10 grains.
Camphor, } of each 6 grains.
Ammonia prepared, }
Syrup of Saffron, ſufficient to form a bolus, to be taken every third or fourth hour.

36. Snake-root Bolus.

Take Snake-root powdered, 20 grains.
Ammonia prepared, 8 grains.
Syrup of Saffron, ſufficient to form a bolus, to be taken every ſix hours.

37. Snake-root Draught.

Take Snake-root bruiſed, 6 drams.
Boiling Water, 12 ounces.
Infuſe in a cloſe veſſel till cold; to one ounce and a half of which add
Ammonia prepared, 5 grains.
Aromatic Confection, 10 grains.
Syrup of Saffron, 2 drams.
Mix.—or from one to two drams of the Tincture of Snake-root may be added to any other of the cordial Draughts, and adminiſtered every fourth, fifth, or ſixth hour.

38. Ipecacoanha Emetic.

Take Ipecacoanha in powder, from 15 to 20 grains.
Pennyroyal Water, 1 ounce.
Syrup of Sugar, 2 drams.
Mix.—

39. Vinous Infusion of Peruvian Bark.

Take of Peruvian Bark, 1 ounce.
Infuſe it in White Wine, 12 ounces.
Dose. Three ſpoonfuls every fourth or fifth hour.

40. Cordial Mixture, with Bark Decoction.

Take Peruvian Bark, 1 ounce.
boil it in one pint of water till it is reduced to 12 ounces, then let it be ſtrained, and add
Tincture of Snake-root, 1 ounce.
Aromatic Confection, 2 drams.
Mix.—Dose. Four table ſpoonfuls every fourth hour.

No. 41. Cordial Mixture, with hot or cold Infusion of Bark.

Take Peruvian Bark, 6 drams.
Infuſe it in ten ounces of *boiling* water for four, in *cold* for eight hours, then let it be ſtrained, and add,
Tincture of Snake-root, 1 ounce.
Compound Spirit of Lavender, 4 drams.
Mix.—Dose. The ſame as (40.)
or volatile ſubſtances may be added to any of theſe vehicles, as Salt, or Liquor of Hartſhorn, Ammonia prepared. See Doſes, P. 229.
If Bark ſhould be diſagreeable in every other form, it may be given in glyſters, though in large proportion. Should the Powder, Tincture, or Extract, be more eligible, ſee the Doſes, P. 300, 301.

42. Absorbent Julep.

Take Crabs Claws prepared, 2 drams.
Gum Arabic powdered, 3 drams.
Cinnamon Water, 6 ounces.
Syrup of Saffron, 4 drams.
Mix.—

or---43.

Take Chalk Mixture, 6 ounces.
Spirit of Nutmegs, } of each 4 drams.
Syrup of Orange Peel, }
Mix.—Doses. Three ſpoonfuls of either often in the day, particularly after every looſe ſtool.

44. Detergent Gargles.

Take Infuſion of Roſes, 1 pint.
Honey of Roſes, 2 ounces.
Mix.---

or---45.

Take Lime Water, 4 ounces.
Honey of Roſes, 1½ ounce.
Mix.---

or---46.

Take Decoction of Barley, 10 ounces.
Honey of Roſes, 2 ounces.
Muriatic Acid, 20 drops.
Mix.---

or---47.

Take Decoction of Barley, 1 pint.
Simple Oxymel, 1 ounce.
Tincture of Myrrh, 1 ounce.
Mix.---

No. 48. Antiseptic Whey.

Take Cow's Milk, 1½ pint.
Water, ½ a pint.
Let theſe be boiled together, and mixed with one ounce and an half of Seville Orange, or Lemon Juice; or mix only one ounce of Lemon Juice, and two of good old Rheniſh, and ſtrain for uſe.

49. Antiseptic Drink.

Take Cryſtals of Tartar, 2 ounces.
Diſſolve theſe in one gallon of Water, and ſweeten with Syrup of Orange Peel.

50. Antiseptic purging Apozem.

Take Tamarinds, 1½ ounce.
Boil them in Water from nine to ſeven ounces, then ſtrain, diſſolve
Manna, 2 ounces.
Tartarized Kali, ½ ounce.
Mix.---

51. Antiseptic aperient Draught.

Take Tartarized Kali, 40 grains.
Manna picked, 1½ dram.
Lemon Juice, 2 drams.
Diſtilled Water, 1½ ounce.
Mix.---Any of theſe may be taken, (No. 49 and 50. in proper doſes,) and repeated agreeable to the effect wanted to be produced.

52. Antiputrescent Draught.

Take Tincture of Roſes, 2 ounces.
Muriated Acid, 5 drops.
Syrup of Quinces, 2 drams.
Mix.—

or---53.

Take Decoction of Bark, 2 ounces.
Muriatic Acid, 5 drops.
Syrup of Quinces, 2 drams.
Mix.---

or---54.

Take Camphor, 6 grains.
Myrrh powdered, 10 grains.
Let theſe be rubbed well together, and add gradually
Decoction of Bark, 2 ounces.
Syrup of Lemon, ½ an ounce.
Mix.---Any of theſe may be taken every third or fourth hour, or oftener, if the exigencies of the caſe require.

No. 55. Camphorated Vinegar.

Take Camphor,	2 drams.

Let this be rubbed down with a few drops of Spirit of Wine, then add

Sugar,	1 ounce.
Diſtilled Vinegar made hot,	2 pints.

Mix.---Dose. Two or three table-ſpoonfuls, or more, every fourth or ſixth hour.

56. Astringent Powder.

Take Styptic Powder, of the Edinburgh Diſpenſatory,	from 8 to 15 grains.
Gum Tragacanth in powder,	15 grains.
Nutmeg powdered,	3 grains.

Mix.---To be given every third or fourth hour, with the Draught, No. 53. as ordered above.

57. Ipecacoanha Draught.

Take Cinnamon Water,	1½ ounce.
Gum Arabic,	2 ſcruples.
Chalk prepared,	1 ſcruple.
Ipecacoanha,	2 grains.
Syrup of White Poppy,	1 dram.

Mix.---

58. Saline volatile Draught.

Take Water of acetated Ammonia,	2 drams.
Cinnamon Water,	1½ ounce.
Opiated Confection,	½ a dram.
Syrup of Saffron,	2 drams.

Mix.---Either of theſe, or three or four table-ſpoonfuls of camphorated Vinegar, (No. 55.) may be adminiſtered every fourth hour.

59. Saline fermentative Draught.

Take Kali prepared,	20 grains.
Peppermint Water,	1 ounce.
Syrup of Quinces,	2 drams.

to which add

Lemon Juice,	½ an ounce.

and let the Draught be drank off whilſt in a ſtate of fermentation.

No. 60. Pomegranate Bark, and Chamomile Decoction.

Take Bark of the Pomegranate Fruit, 1 ounce.
Chamomile Flowers, ½ an ounce.
Let theſe be boiled in
Water, 24 ounces to 16.
then in this Decoction, whilſt hot, infuſe
Orange-peel, 3 drams.
This muſt ſtand in a veſſel covered cloſe till it is cold, then ſtrained off for uſe. To one ounce of this add
Camphorated Vinegar, 2 drams.
Muriatic Acid, 5 drops.
Mix.---And let it be given every fourth hour.

61. Steel Pills.

Take Iron filings, or the Ruſt prepared, } of each 1 dram.
Extract of Gentian, }
Form theſe into 24 pills. Dose. Four.

or---62.

Take Vitriolated Iron, } of each 1 dram.
Extract of Bark, }
Form 24 pills. Dose. Two. A doſe of each of theſe may be taken, three or four times a day---or, one ſpoonful of Chalybeate Wine---or the Decoction of Bark, in the ſame mode as before preſcribed.

63. Aromatic bitter Draught.

Take Quaſſia Wood, 2 drams.
Infuſe in one pint of boiling water, and, when cold, to one ounce and an half add
Vitriolated Iron, 4 grains.
Aromatic Tincture, 30 drops.
Mix---and adminiſter it twice a day; as may be alſo the following bolus:

64. Aromatic bitter Bolus.

Take Chamomile Powder, from 10 to 20 grains.
Myrrh in powder, 6 grains.
Vitriolated Iron, 5 grains.
Aromatic Powder, 6 grains.
Syrup of Saffron, ſufficient to form a bolus.
or, the Steel Pills, (No. 61, 62.) may be adminiſtered in the ſame manner, with four ſpoonfuls of the following infuſion:

No. 65. Aromatic bitter Infusion.

Take compound infuſion of Gentian,	6 ounces.
Tincture of Bark,	6 drams.
Aromatic Confection,	1½ dram.

Mix.—

66. Oil of Castor Emulsion.

Take Oil of Caſtor,	2 ounces.
Mucilage of Gum Arabic, or	
Yolk of Egg, ſufficient quantity to make it mix uniformly with	
Decoction of Barley,	10 ounces.
Syrup of Roſes,	1 ounce.

Mix.---Dose. Four table-ſpoonfuls every ſecond or third hour, till the deſired effect is obtained.

67. Antimonial aperient Mixture.

Take Diſtilled Water,	6 ounces.
in which diſſolve	
Manna,	1½ ounce.
Tartarized Kali,	3 drams.
Antimonial Wine,	40 drops.
Tincture of Senna,	1 ounce.

Mix.---Dose. Four ſpoonfuls every ſecond or third hour, till the deſired effect takes place.

68. Asa foetida Mixture.

Take Aſa fœtida,	1 dram.
Peppermint Water,	4 ounces.
Tincture of Opium,	12 drops.
Syrup of Sugar,	3 drams.

Mix.---Doſe. One ſpoonful every fourth, fifth, or ſixth hour.

69. Camphorated Emulsion.

Take Camphor,	½ a dram.
Mucilage of Gum Arabic,	2 drams.
Let them be rubbed together, and add gradually	
Peppermint Water,	6 ounces.
Tincture of Opium,	10 drops.
Syrup of White Poppy Heads,	1 ounce.

Mix.---Dose. Three or four ſpoonfuls every fourth hour.

§ 5. MIXED FEVERS.

On treating on the different kinds of ſimple fevers, in the four former ſections, we found, that according to their differences, we could diſcover which part of the ſyſtem was in them particularly affected, and conſtituted the diſeaſe.

In the *ſimple continued*, the vaſcular ſyſtem, with reſpect only to its motions, being quickened.

In *the inflammatory*, beſides the increaſe of motion, we perceive tenacity in the blood, and the ſtrength and activity of the veſſels augmented beyond what is natural.

In the *ſlow nervous*, the nerves ſeem to be primarily and chiefly affected, without any increaſe of vaſcular action, but rather a degree of torpor, and defect in their natural motion, with a lentor, or viſcidity of the ſerum, lymph, and thin humours.

In *the putrid*, this nervous affection was accompanied at firſt, or ſoon after, with a putreſcency of the fluids.

Now theſe peculiarities produce particular ſymptoms, which enable us to diſcover their nature. But the claſs of fevers ranked under this head have ſome of the immediate cauſes of theſe ſimple fevers ſo blended together, as the *inflammatory and malignant*, the *malignant and nervous*, the *nervous and inflammatory*—or ſo inſtantaneouſly and imperceptibly follow each other, according to the indications to be deduced from the ſymptoms, that we are at a loſs where to refer them—

as the diſtinguiſhing ſigns of the two different kinds will preſent themſelves at the ſame time; for in ſome we find great nauſea and extreme debility—great heat, with a quick, ſtrong, and hard pulſe—here are the characteriſtic ſymptoms of the inflammatory and putrid united, and form truly the MIXED FEVER. We will, however, now endeavour to explain how theſe ariſe.

When ſpeaking of the brain, (Page 17, 18.) it was there ſaid, that vaſcular irritability might be independent of nervous influence, though, for the continuance of that irritability, nervous influence is abſolutely neceſſary. We muſt now farther obſerve, that vaſcular irritation always requires local ſtimulus for its ſupport, and that the veſſels may be affected without any ſtrong indiſpoſition of the nerves—and ſo on the contrary—and alſo that they may be conjointly affected from the ſame cauſe.

We likewiſe farther affirm, that morbid particles creating diſeaſe produce different effects, from their elective power upon the ſolids as well as fluids—hence from this ſource ariſes the different natures of ſpecific fevers—and hence is it from the different combinations of the cauſes that the mixed fevers deduce their origin.

It ſeems to be an extremely difficult taſk to draw our ideas of theſe fevers into a ſmall compaſs; or ſo to ſimplify them, that all which occur can be brought within the bounds of a conciſe definition; for every cauſe which can produce any of the foregoing febrile

complaints; every part which can alſo be affected in them, may conjunctively appear ſo in theſe; and in ſuch very different degrees, that we are puzzled to diſcriminate to which they can properly belong.

I can by no means agree with the idea of Dr. CULLEN, that the account he has given of the fever he terms SYNOCHUS, which obviouſly is his mixed fever, is at all adequate to comprehend the whole of thoſe fevers, which come certainly under this term—for he ſays, "it is a contagious fever for the moſt part, com-"poſed of the inflammatory fever at the beginning, "in its progreſs, and towards its termination, running "into a nervous or putrid fever,"—which he names typhus—In all which there is no practical utility; for it may be only an inflammatory fever ſimply, thus terminating; which often happens to be the caſe—induced frequently by the violence of the diſeaſe, ſome accidental circumſtances, or miſmanagement. The continued, or vaſculo-plethoric fever, which is ſimple, may, from the ſame cauſes, have the ſame termination.

Though we will not ſay that fevers of the above deſcription may not ſometimes occur, ſtill we think that the complicated affections may always be in a great degree obſerved, and ſhould be particularly pointed out.

From what has been advanced on this ſubject, the great difficulty of forming a definition to comprehend the whole of theſe fevers which may often meet our obſervation, is ſufficiently obvious.

However, in defining theſe fevers in general, I ſhould ſay, that the

ANOMALOUS, OR MIXED FEVERS,

were an affection of the nervous and vaſcular ſyſtem, and ſometimes conjoined with that of the maſs of circulating fluids, producing febrile appearances; but, from the beginning, very often ſo indiſtinctly marked, having the inflammatory, nervous, and putrid ſymptoms ſo blended, that it is difficult to ſay to what kind they moſt peculiarly belong; and if we add to this Dr. CULLEN's opinion, (Page 373.) the idea of mixed fevers will be tolerably complete;—and as we have given the whole of the ſymptoms ſeparately under each of our former diviſions, by conſidering ſome of them here in a conjunctive ſtate; and marking thoſe which are moſt prevalent; we ſhall be enabled to point out what is neceſſary to be done—to alleviate that ſpecies which is the moſt powerful in its action, conſequently the moſt dangerous, and not altogether neglect the other—but this to execute properly requires profound medical knowledge, quick perception, nice diſcrimination, and experienced ſagacity.

SYDENHAM, to whom I ſhall refer my reader, has given us ſome hiſtories of theſe kinds of fevers, under different names, either according to SOME PREVALENT SYMPTOM—as *the ſudatory, or ſweating, the comatous or drowſy* —or to THE INTENT OF NATURE, as the *depuratory, or cleanſing*—the IMITATIVE, as the *variolous fever*, or

that

that ſimilar to the ſmall pox fever—or to THE SEASON, as *the hyemal, or wintery.* We ſhall content ourſelves with preſenting, as a ſpecimen,

The PUERPERAL, or CHILD-BED FEVER,

one of the moſt dangerous and fatal with which medicine is at preſent acquainted.

DESCRIPTION. This fever generally begins on the firſt, ſecond, or third day, ſometimes later, after delivery, with coldneſs or ſhivering preceding any *pains of the belly*, which are *violent*, and *has a ſoreneſs attending over the whole region below the ſtomach, ſcarce capable of bearing the gentleſt touch*—the belly is ſometimes ſoft—ſometimes greatly ſwelled. The pains, though general, will affect ſome one part more particularly than another, and ſhoot from the loins to the groins and thighs, and ſometimes affect the anus and neck of the bladder.

The pulſe is quick and weak, though now and then, eſpecially a little after the attack, ſtrong and full—the ſkin is, for the moſt part, hot and dry, though ſometimes cool and temperate; and, not unfrequently, intermediate ſweats come on all over the body, and uſually afford ſome alleviation—there is a conſtant pain of the head, chiefly of the forehead, and above the eyebrows, attended often with a giddineſs and reſtleſſneſs.

The tongue has very different appearances, commonly white, ſoft, and moiſt, and will thus continue

till near death—then it becomes dry, rough, and of a yellowiſh brown colour—a red line will ſometimes run up its middle, with a whiteneſs on each ſide; the firſt is dry, the laſt moiſt—along with theſe there is alſo a great thirſt.

The face is often fluſhed, ſometimes of a deep red, or livid colour fixed in the cheeks. There appears in the countenance and eyes ſtrong marks of anxiety and dejection of ſpirits. *From the very beginning of this diſtemper, the patients ſeem afraid of taking a full inſpiration, hence is the breathing quick and ſhort, appearing not to proceed from any affection of the lungs very often; and as the diſeaſe increaſes, ſo does the ſhortneſs of breathing.*

There is moſt commonly a cough as a concomitant; —load of the ſtomach—nauſea—and vomiting of yellow, greeniſh, or black materials, frequently attend; but not invariably, though they ſometimes come on from the time of delivery, nay, now and then indeed precede it;—and, at the approach of death, what is vomited up is either green or black.

If blood ſhould be taken away, it is in general ſizy, with a quantity of yellow ſerum. The pain of the head, though very troubleſome, is ſeldom attended, till a few hours before death, with delirium.

The urine at firſt is made with difficulty, and ſmall in quantity, though removed by two or three ſtools; and, as the diſeaſe abates, it is declared by a depoſition of the colour of brick duſt, or whitiſh ſediment.

At the commencement the habit is, for the moſt part, coſtive—ſometimes regular—at others looſe, diſcharging very fœtid and brown coloured fæces—and in both

both ſtates *flatulence attends*,—and the general omens of approaching diſſolution are, involuntary evacuations from the bowels.

In high degrees of this diſeaſe, the patient, for the moſt part, lies on her back, ſeldom turns on either ſide, and never on her belly.

Theſe are the general ſymptoms, by which the fever may be diſcovered, and which appear when the uterus is not affected—but if we perceive any of the ſymptoms which are declaratory of uterine inflammation, we may ſuſpect the affection of that organ a participating cauſe.

CAUSES. Thoſe which are conſidered *as the remote or inducing*, are,

Intemperance *during pregnancy*—too great fatigue, or total want of exerciſe—too high or too low living---coſtiveneſs, or the reverſe---exceſs of joy or grief---moiſt and warm atmoſphere, impregnated with putrid effluvia. *In lying in*, an overheated air---too warm a regimen---ſudden frights---coſtiveneſs after delivery---and every accident which can obſtruct perſpiration---violence, and too great haſte in ſeparating the placenta ---and binding up the trunk of the body with too tight bandages.

Thoſe which are ſaid to be the *proximate* or *immediate*, are,

Impeded circulation, or ſtagnation of the blood, generally in the veſſels of the omentum, (35.) and inteſtines, chiefly the external coat of the ſmall ones, (43.) ſometimes of the womb, (59.) inducing in thoſe parts inflammation, from the debilitated ſtate of the vaſcular ſyſtem there ſituated, brought on by the preſ-

ſure

ſure of the pregnant womb; if cauſes (377.) occur which are capable of producing febrile affections in the habit---which affections are firſt moſt commonly of the inflammatory; afterwards, if the fever in this ſtate is not cured, of the putreſcent kind.

CHARACTERISTIC SIGNS. Common febrile ſymptoms, attended with violent acute pains of the belly below the ſtomach, with ſoreneſs of the parts, ſo great as ſcarce to bear the gentleſt touch—dread in taking a full inſpiration—breathing quick and ſhort, not appearing to proceed from affections of the lungs—and increaſing with the diſeaſe—and in coſtiveneſs, or the reverſe, flatulence.

CURE. The indications are to take off in the firſt inſtance, the inflammation, and prevent the humours from running into a ſtate of putreſcent acrimony---both which are effected by bleeding, if neceſſary, at the onſet---purging---promoting the urinary diſcharge---or ſweating---for in ſome of theſe ways this fever generally goes off, or is conquered, particularly by purging. If the termination is favourable, it occurs in three, four, or five days; if otherwiſe, from the fifth to the twelfth.

Hence, therefore, from what has been above delivered, our medical conduct is plainly pointed out.

If, at an early period of the diſeaſe, the habit is found abounding with blood, the febrile heat great, and the pulſe full and ſtrong, blood muſt be immediately drawn from the arm; and, ſhould the body be coſtive, an emollient aperient glyſter, (No. 25, 26.) ſhould be, as ſoon as poſſible, adminiſtered; but ſhould

not this relieve, by producing evacuation, ſome mild or emollient aperient medicine (Page 264, 265.) muſt be given, till a free diſcharge from the bowels is procured---for ſtools muſt at all events be had; on theſe, at firſt, are founded our greateſt hopes of ſucceſs; as by emptying the firſt paſſages, all diſtenſion from the contained fæces is taken off---flatulence leſſened---irritation from the fæces avoided---and ſome degree of freedom given to the circulating powers of the parts affected.

But this ſhould be done by the gentleſt means---by ſuch medicines as will not create ſickneſs, as the cooling ſaline purge, (No. 3. 23, 24.) or oil of caſtor emulſion. (No. 66.)

Tartarized antimony, (No. 6, 7.) or antimonial wine in ſmall doſes, (Page 278.) are recommended to be given with this intent every ſecond or third hour; but in their purgative effects they are too uncertain---I therefore mix ſmall portions of them with other purgatives, which I think quicken their effects, (No. 3. 22 to 24.) or the antimonial aperient mixture. (No. 67.)

The firſt evacuations are generally fœtid; but if they become afterwards leſs offenſive, and the patient feels herſelf generally relieved, ſhe moſt commonly falls into a ſleep, and a gentle perſpiration ſucceeds, which muſt be encouraged by ſuch medicines as cool at the ſame time that they contribute to promote this purpoſe, ſuch as tartarized antimony, antimonial powder, (No. 6, 7, 8, 9.) and wine, (Page 278.) ipecacoanha, (No. 57.) nitre, (No. 2.) ſaline mixture, (No. 1.) to which may be added ſome ſlight opiate,

(Page

(Page 233.)—for theſe alleviate pain---determine the fluids externally---and prevent their effects from internal diſtenſion, irritation, or acrimony, acquired from local ſolicitude of them internally, and accumulation; beſides, they are diuretic, (Page 268.) and antiſeptic, (Page 298.) without aſtringency, or being productive of heat.

Though, in order to keep up theſe effects, ſo eſſentially neceſſary for recovery, phyſicians in general have ordered mild cooling liquids *to be drank cold*, if the ſkin was dry and hot, the fever and thirſt conſiderable---and *lukewarm*, whilſt the patient was in a ſtate of perſpiration; and very judiciouſly forbid the uſe of cordial ſtimulants, caudles, wines, and heating medicines of every kind:—yet ſome preſcribe a cup of chamomile tea to be drank every hour; but as this, like other bitters, is a ſtimulant, in the inflammatory ſtage of this diſeaſe it does not appear proper. But when ſymptoms of putreſcency are approaching, or commenced, it may be productive of good effects, as it poſſeſſes antiſeptic (Page 298.) powers. Small and repeated doſes of lukewarm diluents, or watery liquids, as rennet, vinegar whey, lemonade, toaſt and water, ſlight infuſion of malt, hydromel of Hippocrates, (Page 275.) or things of a ſimilar nature, anſwer the purpoſes more ſafely, and full as effectually.

Though the greateſt benefit is expected to be derived from clearing the firſt paſſages, attention ſhould alſo be paid to the ſtomach;---and hence, if nauſea, ſickneſs, or vomiting, be one of the concomitant ſymptoms, that organ muſt be attended to, and unloaded

of

of its contents; which will contribute alſo to promote the effects before mentioned; but as the womb is ſuſpended by the broad ligaments, (59.) and thoſe called round, (which are formed of a number of blood-veſſels folded together, running from the corners of the womb in the duplicature of the broad ligaments, paſs through a round aperture on each ſide the lower part of the belly, and are loſt in the fat of each groin) vomiting ſhould be promoted by the eaſieſt means, by drinking copiouſly of chamomile tea, or warm water—for by filling the ſtomach ſufficiently with fluid, its coats will act with eaſe, and the diaphragm (27.) and muſcles of the belly not be thrown into continued and too powerful contraction, which would at this period be dangerous; becauſe the ligaments are now in a relaxed ſtate, and have not yet recovered their natural and healthful tone; hence would the womb be liable to be protruded too much downwards by ſtrong exertions of vomiting.

The caſe here drawn up reſpects only the moſt ſimple appearances of this fever; but it is frequently obſerved to be attended with ſeveral untoward circumſtances.

1ſt. VIOLENT STITCHES IN THE SIDE, and PAIN AT THE PIT OF THE STOMACH will accompany thoſe more conſtant ones of the belly, with a full, hard pulſe, ſymptoms of inflammation, and that ſevere in proportion to the degree of violence.

2d. FLATULENCIES in the ſtomach and colon (45.) will produce pains in the ſides, ſhooting about the ſhort ribs, which fluctuate; and occaſion ſhortneſs of breathing,

breathing, being only attended with a ſlight degree of fever.

3d. A COUGH not unfrequently is an attendant ſymptom—but ſeldom of much conſequence.

4th. A LOOSENESS will ſometimes appear at the very commencement of the fever, ariſing from acrimonious foulneſs in the firſt paſſages.

Theſe we muſt endeavour to alleviate by well-adapted applications. *Under the firſt circumſtances* bleeding muſt be had recourſe to, and that repeatedly, if the violence of the ſymptoms continues, paying proper attention to the ſtrength of the patient; taking care not to be too laviſh in the quantity of blood drawn; for it is ſafer to bleed twice than once too copiouſly. Should the pains be violent, and the breathing much oppreſſed, bliſters muſt be applied immediately, and repeated in proportion to the cauſe, firſt on the ſide affected, afterwards on the oppoſite ſide.

But ſhould the pulſe grow weak, and other ſymptoms of debility come on, declaratory of putreſcency taking place, cordials with tonics, the moſt powerful of which are, volatiles united with bark—camphor—ſpirit of vitriolic or nitrous æther, muſt be brought to our aids and mineral acids. See Putrid Fever, 345, § 4. from whence we ſhall be referred to a variety of preſcriptions capable of anſwering our purpoſes.

And here we muſt obſerve, that the ſeneka root, (Page 277.) has been highly recommended in this, as well as other pleuritic affections; and is in this place conſidered as exceedingly applicable, as it is ſaid to promote ſtools, urine, and ſweat.

Under

Under the ſecond, we muſt apply to aperients, (No. 3. 23 or 24. 66, 67.) if theſe fail of ſucceſs, by their operations, antiſpaſmodics and ſedatives may be tried, chiefly aſa fœtida, camphor, (No. 68, 69.) or muſk, (No. 31. 34, 35.) with opium.

Under the third, in ſlight caſes, oily emulſions may be adminiſtered, as in common coughs; but ſhould there be at the ſame time a ſevere pain in the head, a bliſter ſhould be applied between the ſhoulders—ſteams of vinegar and water inhaled into the lungs—gentle opiates, (233.) or ſpirit of vitriolic æther, (230.) adminiſtered.

Under the fourth, we are not to attempt to check the diſcharge by the uſe of aſtringents; for from this every good is to be expected—we muſt here rather chuſe to aſſiſt nature by the free uſe of thoſe drinks we have in common recommended;—but ſhould it not come on till the cloſe of the diſeaſe, and be apparently critical, we muſt endeavour to ſupport the patient under it, and aim at correcting the putreſcent ſtate of the habit, by antiſeptics and cordials, both in glyſters and by the mouth, and proper nouriſhment. The glyſters ſhould be emollient, diluting, and nutritious, compoſed of broths, beef-tea, chamomile infuſion, with oil, and impregnated with fixable air;—wine, wine and water, may be given—alſo cordial mixtures with cinnamon, (No. 13, 14, 15. 18. 28, 29.) omitting the volatile ſubſtances, except in caſes of faintneſs, when they may be occaſionally added—the aromatic confection may be alſo changed for the extract of logwood, or the infuſion may form the vehicle, (212.)—and after the

diarrhœa

diarrhœa has been checked by proper remedies, we muſt not forget the bark joined with aromatics, (No. 39 to 41.) and opiates. Beſides, beef-tea, chocolate, hartſhorn jelly, and ſuch like, ſhould be given by way of nouriſhment—lime-water with milk; and, in fine, all ſuch things as have the power of correcting putreſcency, and preſerving as much as poſſible the vigour of the conſtitution—hence reſt of body, quietude of mind, cleanlineſs, and cool air, are eſſential auxiliaries, and ſhould be attended to with the greateſt exactitude: and as lying-in women all have a greater or leſs degree of the prediſpoſing cauſe in their habits, from the very nature, and unavoidable conſequences of pregnancy, ariſing from the diſtenſion of the womb, producing impeded circulation, and vaſcular debility, the remote or inducing cauſes (377.) ſhould be avoided—and from thence the acceſſion of the fever prevented: and as there is no diſeaſe, when perfectly formed, more dangerous in itſelf, ſo difficult to cure, ſtill ſo eaſy to be produced by indiſcretion and ignorance, I would on every conſideration recommend the preventive mode to be cloſely ſtudied, and aſſiduouſly purſued.

We have now gone through that ſeries of fevers, of the four firſt of which, *all*, either in their ſeparate or conjunct ſtate, whatever they be denominated, conſiſt; and it clearly appears, that the parts of the conſtitution which are affected, are thoſe which form the moving powers, (68.) and that it is by the morbid alteration of their action alone that fevers are produced; conſe-

conſequently, that it is from regulating their motions, and reducing them to a proper ſtandard, that we can derive benefit in our curative, as well as preventive attempts; for inſtance:

IN THE SIMPLE CONTINUED FEVER we find a ſuperabundance of blood, and irritable ſtate of the vaſcular ſyſtem put into motion by ſome remote cauſe, occaſioning increaſe of action—*in order to cure*, we leſſen the former, and decreaſe the latter—for here we ſuppoſe not any contamination of the circulating fluids to have taken place.

IN THE INFLAMMATORY FEVER we find, to the ſuperabundance of blood is added a morbid tenacity, and to the irritability a morbid augmentation of vaſcular ſtrength or firmneſs—*in order to cure*, our efforts are the ſame as in the former caſe, only more powerfully, copiouſly, and quickly exerted, with intent to thin the fluids, and debilitate the force of vaſcular action, as well as leſſen the quantity of blood, and decreaſe the quickneſs of vaſcular motion.

IN THE NERVOUS we find a different conſtitutional ſtate of the moving powers—a torpor of the vaſcular ſyſtem—ropy viſcidity of the ſerous or lymphatic fluids—with a morbid inactivity of the nervous ſyſtem ---*in order to cure*, we endeavour to rouſe the nerves to the performance of their due action, and increaſe the irritability of the ſanguinary veſſels through the habit.

IN THE PUTRID we find, added to one or other of the ſtates of the vaſcular or nervous ſyſtem, a putreſcent ſtate of the fluids, either from the abſorption of putrid particles, or the generation of them in the habit

---*in order to cure*, we attempt to ſupport the vigour of the ſyſtem, and correct the putreſcent acrimony of the fluids, according to the affection of the moving powers—if of the inflammatory kind, by mitigating their too violent action—if of the nervous, by rouſing their active powers, ſo that in due time the offenſive matter may be ſeparated from, and thrown out of the maſs of fluids, by ſome of the outlets of the machine; which is the caſe in all other fevers that deduce their origin from any peccant matter in the habit.

And we may venture to aſſert, that any practitioner who cloſely ſtudies, and perfectly underſtands the nature and management of the four kinds of fevers ſpecified above, will be fully competent to conduct his patient, in the beſt manner, through every kind of fever, be its nature ever ſo apparently complicated.

But, beſides the fevers we have particularized, there are others, denominated according to their form or mode of progreſs, REMITTENT or INTERMITTENT, though they really are of the nature of thoſe of which we have before treated, either in their ſeparate or conjunct ſtate; and of which we muſt now proceed to explain.

CHAP.

SECTION IX.

CHAP. I.

REMITTENT FEVER.

FEVERS of this kind receive their name from the mode which they preſerve through their progreſs, ſteering betwixt thoſe of the continued and the intermittent claſs; for though the fever does not preſerve throughout an equal degree of violence as in the former, there is never a total ceſſation of febrile affection before its termination, as in the latter. Theſe fevers, therefore, move betwixt the two extremes; having, inſtead of freſh acceſſions, as they are called in intermittents, only repeated increaſe of action, denominated exacerbations; between which a degree of vaſcular contraction and proſtration of ſtrength are continued, indicative of the preſence of the febrile cauſe ſtill in action; and from hence they take their name.

But, indeed, the remiſſions are ſometimes ſo ſlight, that they are with difficulty diſtinguiſhed by the cloſeſt attention from continued fevers—though this diſcrimination is highly neceſſary, as they yield more in their mode of cure to that we ſhall find employed in intermittents, being ſubdued with more certainty by the bark, *judiciouſly adminiſtered*, than by any other application. Indeed, they ſeem to have ſo great affinity with the continued and intermittent fever, that they ſometimes run into one, ſometimes into the other—and the con-

tinued, before it becomes intermittent perfectly, will aſſume the remittent type, ſo will the intermittent before it changes into a continued.

From ſome appearances occurring in the courſe of theſe fevers, they have been divided into *quotidian*---*tertian*---or *quartan*—according as the remiſſion has happened on the ſecond, third, or fourth day; but in this diviſion there appears to be no practical utility—as it leads not to any particular mode of cure, nor aſſiſts in diſtinguiſhing the nature of them, whether they verge moſt to the inflammatory or putrid claſs, which knowledge alone muſt determine our operations.

DESCRIPTION. They, like other fevers, generally begin with alternate chills and heat, ſtretching and yawning; and theſe are ſucceeded by nauſea, vomiting of bile, giddineſs, and oppreſſion—then commences the fever, and the heat continues; after theſe follow pain of the head, back, and limbs—heartburn — and thirſt — difficult breathing — anxiety — inquietude — and, ſometimes from the firſt attack, delirium—the ſtomach ſwells now and then—the eyes are generally tinged with a yellow colour, and that diffuſed over the whole body not unfrequently—the tongue is white and moiſt—the pulſe ſometimes hard, ſeldom full—the bowels are at one time obſtructed, at another the reverſe.

Thus ſituated are ſome periods betwixt the ſecond and eighth day; which time a remiſſion very rarely exceeds; for the moſt part a gentle ſweat will come on, and brings an alleviation of all the febrile ſymptoms; and this continues for ſome hours;

after

after which, generally in the evening, the violence of the fever is renewed, ſometimes preceded by chillneſs, ſometimes not.

This repetition hath no fixed time for its continuance, in ſome remaining a longer, in others a ſhorter ſpace; but at laſt gives way in its degree of violence, and remits a ſecond time; and thus continues fluctuating till either totally ſubdued by nature or art—or death cloſes the ſcene.

When this laſt is the caſe, the patient often dies in the paroxyſm, or renewal of the attack—the brain is immediately affected—he loſes his ſenſes, and the power of ſpeech—his breathing becomes quick—deglutition is impeded—a looſeneſs comes on—the pulſe in the beginning ſoft, not to be called weak, nor indicative of danger, in a few hours is ſmall and depreſſed, then cold ſweats break out, and the unhappy victim expires.

Theſe fevers have, by ſome, been ſtiled *bilious*, from the vomiting of bile, ſo common in their commencement, and the yellow ſuffuſion on the ſkin and whites of the eyes; ſuppoſing theſe ſymptoms to ariſe from the ſuperabundance of bilious excretion, and the activity of the bile reſorbed into the habit, occaſioning ſuch febrile commotions—But it is obvious this change of colour is owing to another cauſe, and *that*, the breaking down of the texture of the blood from the putreſcent tendency of the fluids; and thus may the colour more properly be accounted for; becauſe the bile may be returned into the blood, as in the jaundice, without producing theſe febrile attacks.

In hot countries that are marſhy, where the atmoſphere is filled from thence with putrid exhalations, they are *endemial*, that is, native and reſident—with us, and other parts of Europe, they have been obſerved to become *epidemical*, that is, occaſionally general towards the latter end of autumn.

CAUSES. The *remote* or *inducing* are ſaid by ſome, as well as the *proximate*, to be ſuch as bring on a continued, or inflammatory, or a putrid fever, (324. 345.) whilſt others attribute *the firſt* to too great moiſture in the air, *the laſt* to inſenſible perſpiration impeded, and a relaxed ſtate of fibres. However, from the hiſtory of theſe fevers, it is obvious, that they, at different periods, and in different conſtitutions, put on appearances which are very different, and according to which we are to regulate our conduct. Hence we ſay, the

CHARACTERISTIC SIGNS are, a remiſſion or abatement, not a total ceſſation of febrile affections, ſucceeded by perceptible exacerbations, or increaſe of febrile violence; which increaſe is *ſometimes* uſhered in with chillneſs;—and if there are ſtrong ſymptoms of vaſcular contraction, and great increaſe of circulatory motion, which are declared by *extreme heat---thirſt---* and *pain*---having a *dry ſkin*, a *ſtrong, hard, and full pulſe*, for their aſſociates, we ſhall not heſitate to pronounce it INFLAMMATORY;—but if attended with *great debility---lowneſs of ſpirits---nauſea---oppreſſion---vomiting*---coupled with *diſcolouration of the ſkin, and languid pulſe*, its belonging to the putrid claſs is indiſputable.

This

This fever is never free from danger; though the nearer it approaches to an intermittent, or the leſs degree of fever continues during the remiſſion, ſo much more favourable the omen; but, on the contrary, the more it puts on the appearance of a continued fever, the ſhorter the remiſſion, and more violent the fever fit, ſo much the more dangerous. If the urine, which was before of a deep colour, becomes pale, we have great reaſon for fear—If it changes its remittent for a continued type, the event is doubtful—and when the the brain is affected, and the reſt of the ſymptoms, as deſcribed (Page 389. line 10, &c.) death is near at hand.

CURE. The indications are ſimilar to what we have delivered on the inflammatory (324) and putrid (345) fevers, adapted to peculiar ſtates agreeing with them, by which this fever may be changed into an intermittent, or totally taken off—conſequently, where the inflammatory ſymptoms are prevalent, bleeding, cooling purges and glyſters—vomits—and ſmall doſes of antimonials—watery diluting liquids drank plentifully—cooling aceſcent vegetables—will be the moſt eligible at the commencement, and will ſo far anſwer the purpoſe in ſome caſes, that nature afterwards may be almoſt left to herſelf.

Still, in others, ſhe requires the moſt immediate and powerful aſſiſtance—hence it is neceſſary to point out the different progreſſive appearances, by which may be diſcovered the ſituation of ſafety, or danger, and the mode of proper management under each, as, from imprudent conduct, this fever, from its mildeſt

ſtate, may be converted into that of extreme peril, and from this laſt into certain death.

If, therefore, the increaſe of the febrile affections, a third time, ſhould not be more violent, nor of longer continuance than that which preceded, but nearly ſimilar—if the urine ſhould let fall a laudable ſediment, without any viſible decreaſe of ſtrength, or increaſed dejection of ſpirits, matters will wear a favourable aſpect; and about the fourth or fifth return of the fever, the powers of the conſtitution will commonly relieve themſelves by ſome critical evacuation, either by the KIDNEYS, SKIN, INTESTINES, SALIVARY SYSTEM, or LUNGS, manifeſted in *turbid urine*, *profuſe ſweat*, *bilious ſtools*, *copious ſpitting*, or *expectoration of matter of a yellow caſt*—for the fever generally reſolves itſelf in one or more of theſe ways.

But, on the fifth return, ſhould there appear to be an increaſe in degrees of ſeverity, in the ſymptoms becoming more acute and dangerous—if the fit continues longer, and is more violent than before, and there are obviouſly a ſinking and lowneſs of ſpirits, with great debility of the powers of the ſyſtem, we muſt have recourſe to bliſters, which ſome indeed adviſe at an earlier period, as calculated in a remarkable manner to bring on the intermittent type—and bark as ſoon as poſſible in the remiſſion; forty or ſixty grains of the powder may be adminiſtered every ſecond or third hour—or, if the ſtomach will not bear this quantity, a ſmaller doſe be given at ſhorter periods, or the decoction, (300.) hot or cold infuſion, (No. 41.) with or without the volatiles or aromatics, as ſeem neceſſary;

ceſſary; to which alſo may be occaſionally added, the other preparations of this medicine, (300, 301.)—by theſe means we muſt endeavour to ſtop, or at leaſt retard the progreſs of the next febrile fit, by throwing into the habit a ſufficient quantity—and thus muſt we proceed till we ſhall be empowered within twelve or fourteen hours to adminiſter ſix or eight drams.

If we are not active at this period, and attempt not with all our power to mitigate, or conquer the febrile acceſſions, we run the riſque of protracting the diſeaſe and rendering it more replete with danger; for now the fits become ſo quick, following each other ſo rapidly, that we are deprived of the opportunity of throwing in the bark in proper quantity, and permitting a continued fever to be the conſequence.

But though bark in ſome ſtates of this fever is ſo extremely uſeful, ſtill, in every ſtage it is not neceſſary—nay, indeed, in the inflammatory remittents, (390.) it is dangerous to adminiſter it, whilſt the action of the veſſels are too powerful; for from this we might produce the inflammatory continued fever; therefore we muſt endeavour to lower the ſyſtem, by thoſe means adviſed, (391, line 19.)—that done, the bark may then be advantageouſly thrown in.

Before we cloſe the account of this fever, we muſt obſerve, that though bleeding, and that repeatedly, has been adviſed in ſome of theſe fevers, and with conſiderable advantage; yet under ſome circumſtances there requires the niceſt caution, with reſpect to the quantity to be taken away, notwithſtanding the commencement being uſhered in with ſuch ſymptoms, as might

might authoriſe the operation; for bleeding has been allowed to do miſchief, eſpecially in hot countries, for there theſe fevers are generally of the putrid kind—therefore in our firſt bleedings the quantity ſhould be moderate, ſeldom exceeding eight ounces—which may be repeated in caſe the inflammatory ſymptoms continue violent—but ſhould theſe only be ſlight at firſt, and evacuations are neceſſary to be promoted, we can only depend upon the gentleſt cathartics, ſuch as oil of caſtor, manna, tartarized kali, Polychreſt ſalt, and tartarized antimony. (See Cathartics, Simple continued, and Inflammatory fevers) where different formulæ will be found—and alſo the ſaline mixture—which laſt often repeated, is ſaid to be the moſt certain alleviator of the violent nauſea and vomiting, which generally attend theſe caſes—or it may be given in its ſtate of fermentation, (No. 59.) and is greatly aſſiſtant in correcting the putrid diſpoſition, and thoſe foulneſſes which are collected in the ſtomach and flexure of the duodenum, (44.)—afterwards the bark muſt be freely applied. By theſe means thouſands have been ſaved;—and if they are begun with before the ſtrength of the patient is exhauſted, and will properly purſue the advice given, ſeldom any die of this diſeaſe.

However in the Weſt Indies in this fever there is ſomething very ſingular, for it has been obſerved, that if the bark was not given on the firſt remiſſion, it was apt to run into the continued ſpecies.

There are innumerable varieties of theſe fevers mentioned by authors, who have given them different names,

names, according to ſome peculiar circumſtances which attended—but all yield to the mode of treatment here pointed out—only in ſome paying particular attention to any uncommon ſymptom which occurred—two of which we ſhall point out.

BILIOUS REMITTENT FEVER.

This attacks generally in the middle of Auguſt, and is attended, beſides the common ſymptoms, with violent pain of the head, and often with delirium, which ſymptoms continue in the night, vaniſh in the day-time, after ſweating, a hæmorrhage or looſeneſs. In the beginning there is frequent nauſea, bilious putrid vomiting, and in the end oppreſſion.

In extreme cold weather, and at the approach of winter, a cough, rheumatic affections, and tenacity of the blood, accompanies theſe fevers—but it is from the bilious purging and vomiting that it derives its name. If evacuations are not directed, a continued fever with yellowneſs comes on. The cure is performed by vomits, cathartics, acids, and bark; but we muſt firſt perſiſt in the uſe of evacuants before we give the bark, and then it is admirably conducive to promote the cure. This remittent is eſteemed of the inflammatory claſs.

The other we ſhall mention is of the putrid claſs.

MARSH REMITTENT FEVER.

This is the bilious, or putrid fever of the low marſhy countries deſcribed by Sir JOHN PRINGLE.

This

This fever not only happens in moiſt, but alſo in warm countries, according to the ſeaſon, as they come on in the months of July and Auguſt, from putrid vapours ariſing from corrupted plants or fiſh.

This bears bleeding very indifferently, and ſhould rather be treated in the evacuating and ſtrengthening method; at the beginning clearing the firſt paſſages with gentle emetics and cathartics, and continuing ſmall doſes of antimonials—which not ſucceeding to our wiſh, bark muſt be called into our aid to perform the cure.

In order to prevent the attacks of the remittent fevers, as they are chiefly the children of moiſt ſeaſons, and low marſhy countries, we ſhould keep good fires, with intent to correct the atmoſpheric humidity—make uſe of aromatics—avoid the evening and morning air—drink red wine—uſe exerciſe and the cold bath—take bark once or twice a day, mixed with bitters—and ſmoak tobacco—for people who have obſerved theſe rules have, many of them, eſcaped in countries where this fever has raged epidemically, and afflicted numbers who have deſpiſed theſe cautions.

SECTION X.

INTERMITTENT FEVER.

THESE fevers receive their name from the nature of their progreſs, having a perfect ceſſation of febrile affec-

affections from the termination of one fit to the beginning of another, and may be conſidered as continued fevers of ſhort duration, conſiſting of many febrile fits, the fever returning at ſtated periods; for in every fit the courſe of a continued fever is run through ---the coldneſs and ſhivering is the beginning---the hot fit the height---and the ſweating generally attendant, or at leaſt a gentle perſpiration the criſis or termination. What happens in theſe different ſtages is thus properly deſcribed:

DESCRIPTION. IN THE FIRST STAGE it begins with yawning and ſtretching, and a certain indeſcribable ſenſation in the back and the ends of the fingers; after theſe ſucceed exceſſive coldneſs, inſomuch, that it occaſions violent ſhaking of the whole body, and chattering of the teeth; ſtill, in fact, the blood is in a ſtate of increaſed, rather than diminiſhed heat---there are alſo nauſea, and ſometimes vomiting attendant, with pains of the back, head, and limbs---the ends of the noſe, ears, lips, and cheeks grow pale---the nails livid---the breathing is difficult---the urine pale and limpid---the pulſe weak, and extremely quick---and this cold fit continues for one, two, three, four, or five hours ſometimes, at others only half an hour before the hot fit commences---which forms the

SECOND STAGE, in which there is extreme degree of heat immediately ſucceeding the cold, which goes off gradually: in this the pulſe becomes full, quick, and ſtrong---the head is painful---and ſometimes the patients are delirious---their breathing is forcible and free---the tongue white, attended with great thirſt---at the

the pit of the ſtomach they complain of much heat, have pain there, and ſometimes ſwelling---the urine is high coloured---and when blood is taken from the arm it is more denſe than uſual, particularly in ſpring ---ſometimes in unwholeſome ſituations and ſeaſons the ſuperior part is red, the inferior black, with a ſmall portion of ſerum, and that leſs coheſive than when in health. At the commencement of the

THIRD STAGE there breaks out a general and copious ſweat, which alleviates the extreme heat, and mitigates all the ſymptoms, which, on the ſweat continuing for ſome hours, totally vaniſhes---the urine depoſits a ſediment like brick-duſt---the patient falls into a ſound ſleep---and thus the fit cloſes with a ceſſation of all the febrile ſymptoms; and this, called the intermiſſion, in which the patient feels ſome degree of debility, has much propenſity to ſweat, and little or no appetite.

It has been thought that we could prognoſticate the violence of the hot, by the degrees of duration of the cold fit, for the longer the latter continued, the more ſevere would be the former---but this is erroneous, for the ſenſation of cold grows weaker in long continued intermittents.

In ſome countries theſe fevers are peculiar, as the fens of Cambridgeſhire, Lincolnſhire, the low parts of Kent, the marſhes of Eſſex, and in places where there is much moiſture, and the ſituation low; and here they generally appear in ſpring or autumn. They ſeldom viſit other places, except in ſeaſons adapted to their propagation, and then they become epidemic.

They

They have been divided into vernal and autumnal, endemical and epidemical, and into *quotidian*, where, from the termination of one fit to the beginning of another the ſpace of 24 hours is conſumed---*tertian*, where that of 48---*quartan*, where of 72---and when longer, erratic. They have alſo been divided farther; but they ſeem to be of no practical uſe, as the modes of cure in all are very ſimilar.

CAUSES. The *remote* or *inducing* are, immoderate evacuations---cold moiſt atmoſphere---irregular or improper diet of crude watery vegetables---lowneſs of ſpirits---crudities in the firſt paſſages---and, in fine, every thing which contributes to produce a relaxed ſtate of the ſolids, and poverty of the blood.

The *proximate* or *immediate*, effluvia from moiſt, marſhy places, called marſh miaſma---impeded perſpiration, and relaxation of the ſolids.

Hence are the poor more ſubject to this diſeaſe than the rich and affluent, thoſe who inhabit the country more than thoſe who live in large towns and populous cities; for generous diet and warmth are preſervatives againſt the diſeaſe, as well by purifying the air, as invigorating the habit.

CHARACTERISTIC SIGNS. Affections of both the nervous and vaſcular ſyſtems, from marſh effluvia running through the courſe of a continued fever, of ſhort duration, beginning with cold and ſhivering, ſucceeded by great heat, and terminating, for the moſt part, in profuſe ſweats, in one fit, which leaves the habit perfectly free from fever for ſome time, and returns at ſtated periods.

CURE. The indications are, to prevent the return of the febrile affections, by taking off the too great incitability of the nervous, and irritability of the vaſcular ſyſtem, by giving tone or ſtrength to the nerves and veſſels, and rendering them incapable of feeling the effect of morbid particles in the habits, called marſh miaſmata, and ejecting them out of the conſtitution.

But at the commencement of fevers we cannot immediately diſcover of what particular nature they are, and one the leaſt dangerous may be converted into others which are more hazardous, by injudicious treatment, as an intermittent into a remittent, and this into a continued; we ſhould at the firſt onſet be careful, till we are convinced of its ſpecific nature; therefore to general means we ſhould only have recourſe, which may in all fevers be proper, be they of what ſort they may, and this will depend on placing the conſtitution under ſuch circumſtances as approach nearer to a ſtate of health.

Therefore, in the beginning, if the pulſe give evident ſigns of fullneſs, with other concomitant ſymptoms, which indicate evacuations to be proper, as we have before ſpecified in the remittent and other fevers, blood may be taken from the arm. Should there be nauſea or ſickneſs, indicative of foulneſs of the ſtomach, an emetic, (No. 11, 12. 38.) ſhould be adminiſtered, and the bowels cleared by ſome gentle aperient medicine. (No. 3. 22 to 24.)

Where theſe are thought neceſſary, bleeding and cathartics ſhould precede the adminiſtration of the emetic,

tic, that no miſchief may ariſe from its operation, which might be the caſe, ſhould there be any local congeſtion, or too great general fullneſs, by rupturing, or diſtending the veſſels too much, or puſhing the blood too powerfully into the ſmall capillary tubes, particularly of the head.

If theſe prove inſufficient, we muſt proceed to the uſe of antimonials in ſmall doſes, united with the ſaline mixture, or alone, (No. 6 to 9.) as has been before directed—and, as ſoon as the fever ſhews what it is, take ſuch ſteps as its nature demands—if an intermittent, the moſt powerful medicine, with which obſervation and experience has furniſhed us, is the Peruvian bark, (300, 301.)—the quantity given ſhould be generally ſo much in the interval between the fits as will prevent their return, that is, in adults, from ſix to eight drams.

The moſt efficacious mode of adminiſtration that has been recommended, is in powder mixed with red wine.

Where the intermiſſion is ſhort, it is given at ſhorter intervals, and vice verſa. I always conſider what is moſt agreeable to the patient reſpecting the form, and give a doſe every one, two, three, or four hours, as occaſion requires—the nearer the approach of the uſual time of acceſſion, the quicker it ſhould be repeated, in order that it may at that time exert its fulleſt action with its greateſt power.

Should the febrile fits be by theſe means conquered, we muſt not totally deſiſt from its uſe, but for a few days repeat it at proper intervals, every fifth or ſixth hour;

then for a week, twice in the twenty-four hours; afterwards, once for the ſame ſpace.

In winter, after deſiſting for a week, or ten days, it will be prudent to return to it again occaſionally for two or three days, and ſo perſiſt for a few times, which will effectually ſecure the patient from a relapſe. Add to this, the patient ſhould avoid expoſing himſelf to the remote or inducing cauſes, (399.) uſe gentle exerciſe, particularly riding—light nutritious diet---animal food—red port, claret, or any generous wine, in proper quantities—ſuch as are eaſily digeſted, will ſerve to ſtrengthen the ſolids, and promote a free and regular circulation.

Large draughts of any kind of liquids, however thirſty the patient may be, ſhould not be allowed in the cold fit, as they will load the ſtomach too much, and increaſe internal oppreſſion and uneaſineſs; but in the hot fit, watery fluids, ſuch as ſage, roſemary, balm-tea, ſmall white-wine whey, and ſuch like, may be liberally adminiſtered.

The forms in which the bark is adminiſtered, are either in bolus, pills, electuary, decoction, infuſion with cold or hot water, ſimple powder, tincture, or extract. (See the doſes, 300, 301.)

When we want to throw in as much as poſſible in a given time, (ſee No. 70.) and let it be adminiſtered every ſecond, third, or fourth hour, according to the times of the febrile acceſſions. (401.)

Where bark has diſagreed, equal portions of quaſſia wood and ſnake-root, infuſed in boiling water, or oak bark in powder, or extract alone, joined with alum, or

chamo-

chamomile flowers, have been efficacious, given during the intermiſſions every three or four hours, (No. 71, 72.)—the virtues alſo of cupulæ, or ſcaly cup, which embraces the bottom of the acorn, are ſimilar, in a conſiderable degree, to the oak bark.

The method above laid down will generally be ſucceſsful in the quotidian and tertian intermittents, (399.) particularly if we couple ſuch medicines along with the bark as the nature of the conſtitution of the patient, and the apparent febrile ſymptoms indicate, viz. if the habit appears robuſt, the pulſe, in the febrile fit, full, hard, and quick, with other inflammatory ſymptoms, bleeding has been greatly beneficial; and in theſe caſes, joining the bark with ſaline ſubſtances, as tartarized kali neutralized with lemon juice, (No. 1.) and the decoction of bark, or fixed ſal ammoniac, (272.)—if contrary appearances, cordials and volatiles have ſupplied their places, as volatile ſalt of hartſhorn, (229.) tincture of ſnake-root. (277.)

Notwithſtanding which, they will ſometimes prove very obſtinate—in theſe caſes vomits (No. 11, 12. 38.) given a ſmall ſpace of time before the return of the fit, and antimonials in ſmall doſes, (360.) purſued through the courſe of the hot fit, have been found beneficial—or, where the habit has been in a highly irritable ſtate, opium (233.) adminiſtered before the fit, or in the hot ſtage, ſeemed of uſe.

It is only though in the quartan (399.) intermittent that they are often required, ſeldom in the others preceding, notwithſtanding the hot and cold fits continue

a ſhorter time than the two former, the whole fit ſeldom laſting above five hours.

Bark ſeldom fails of completing a cure, if judiciouſly adminiſtered, and the concomitant circumſtances which ſometimes appear, are properly attended to—when it does, the failure is owing to ſome of the following particulars---either it has been given in too ſmall doſes---not perſiſted in long enough—given in an improper form---or ſuch medicines may not have been added to it, nor ſuch a regimen obſerved, as the peculiar nature of the caſe required.

Sometimes the bark has a tendency to paſs off through the bowels, then it is neceſſary to add a few drops of tincture of opium to each doſe, which will prevent that effect---at others the habit will be too coſtive, eight or ten grains of rhubarb may be given ſoon after the ceſſation of the fit, to obviate that inconvenience---ſometimes the ſtomach will not bear it, it may then be adminiſtered in form of glyſter, (No. 73.)

It is ſometimes extremely difficult, and very often impoſſible, to get children to take a ſufficient quantity of this medicine to anſwer the deſired purpoſe---for the beſt form to which they will adhere the longeſt, (See No. 74.)

But they have been cured by baths, in which half their body has been immerſed, of bark decoction, rubbing the ſpine with equal parts of ſoap liniment and tincture of opium---or wearing a waiſtcoat made of callico doubled, within which bark has been quilted.

With

With reſpect to our prognoſtics in this diſeaſe, when eruptions appear upon the lips, they afford a good omen; and the more regularly the fever paſſes through its ſtages, ſo much the better. Epidemic fevers of this kind are worſe than thoſe which occur accidentally to a few---quartans than quotidians or tertians---autumnal than vernal.---Inflammation of the tonſils is conſidered as mortal---ſometimes it carries off thoſe who are very infirm in the firſt ſtage---they frequently leave the conſtitution extremely weak, ſo that it requires a long time for the re-eſtabliſhment of perfect health; which muſt be aſſiſted by proper regimen, and exerciſe, as has before been ſpecified, after the termination of other ſevere fevers—ſometimes they terminate in jaundice, conſumptions, and dropſies, which, if they ariſe from ſcirrhoſities, or hard irreſoluble tumours of the viſcera, are fatal.

But, notwithſtanding what may be thought, with reſpect to the neceſſity of an early cure, it is not always proper to take off this fever immediately—for by their continuance, they have been known to cure epilepſy, ſevere coughs from affections of the liver; alſo hypochondriac and gouty affections have diſappeared, by this fever bringing about, from its continuance, ſome ſalutary conſtitutional changes—the bleeding piles, ſmall-pox, and other acute fevers, as well as ſtrong mental affections, have been known, on the other hand, to ſubdue the ague.

SECTION XI.

HECTIC FEVER, OR CHRONIC REMITTENT FEVER WITHOUT CRISIS.

THUS would I wiſh to denominate this fever, becauſe the word HECTIC, except from long continued cuſtom alone, gives us no determinate idea reſpecting it; and where any complaint is peculiarly marked by any known cauſe or ſymptoms, by which it deviates from all others of the ſame claſs, and by which from them it may be diſtinguiſhed, can be confined in a very ſhort compaſs, by terms expreſſive of that peculiarity would I have it marked down. As, therefore, hectic fever is of longer duration than any other remittent fever, goes off, when curable, by no known criſis, and, during the whole courſe, has various exacerbations and remiſſions, I have ventured to alter its appellation.

Authors have been much divided with reſpect to this fever, *ſome* conſidering it *always* ſymptomatic, deriving its ſource from ſome local complaint, and depending entirely on that—others, that it may alſo be a primary diſeaſe, neither ariſing from, nor dependent on any other—for the latter opinion I confeſs myſelf an advocate; for, though hectic ſymptoms certainly do derive their ſource from ſcirrhous obſtructions and ulcerations of all the viſcera, more particularly of the lungs (19.) and meſentery, (50.) becauſe it is ſaid the former are expoſed to injuries from the external air,

and

and the force of the blood circulating through their ſubſtance; the latter is ſubject to the ſame from compreſſion of the aliments in the firſt paſſages, from viſcid chyle, (42.) and the ſlower circulation of the blood through the inteſtines; ſtill may they ariſe immediately from ſome acrimony of the blood, becauſe they have occurred certainly where no one viſcus, through the whole courſe of the diſeaſe, was affected more than the reſt; nor do the viſceral obſtructions, which are always found on diſſection, deſtroy the validity of this opinion; for they are the effects, as well as cauſes, of hectic fevers —of which we ſhall be convinced, if we will only examine the remote or inducing cauſes, which we ſhall ſhortly ſpecify.

DESCRIPTION. The ſymptoms are very ſimilar to what appear in conſumption of the lungs—the patients labouring under this complaint have a continued, dry, unnatural heat; they loſe their appetite, and their pulſe is ſmall, weak, and frequent, though fuller and ſtronger after eating; they have no ſenſation of ſickneſs; after meals a fluſhing of the cheeks comes on; and their urine is in general red, and covered with an oily pellicle; their ſleep by no means refreſhes them; they become hollow-eyed; the ſkin grows harſh, the belly ſinks inwards; a colliquative looſeneſs comes on, the body grows tabid, and death makes its approach by ſlow degrees.

On this fever the ſagacious Dr. Heberden has made ſeveral uſeful remarks in the London Medical Tranſactions, Vol. II. page 1, &c. amongſt which he ſays, "the moſt certain mark of this fever is, when the

" ſweat, which uſually attends this fever, is over; the " fever will ſometimes continue, and in the middle the " chillneſs will return."

This is very readily diſtinguiſhed from all other fevers by the ſlowneſs of its progreſs—but from the firſt ſtage of the watery head, with great difficulty, and not without the moſt aſſiduous attention to the ſymptoms peculiar to each.

CAUSES. *Remote* or *inducing* are, immoderate and long continued mental affections—long watchings—too great evacuations, whether of blood, milk, ſemen, ſaliva, pus, ſweat, or the alvine fluids—too acrid medicines, as mercurial preparations, ſtrong purges, too often repeated—debility of the firſt paſſages, by which the chyle, either crude or corrupted, is conveyed into the circulating maſs of fluids—preceding diſeaſes, as intermittents, ſmall-pox, meaſles, dropſy, ſcurvy, king's evil, ſo called—ſuppreſſed evacuations—frequent intoxication—old people and infants are alſo ſubject to it, from their age alone, dependent upon conſtitutional debility.

The *proximate* or *immediate*, both from the preceding cauſes, and the modes of cure, are ſaid to be, a ſaline and alcaleſcent ſtate of the fluids—whether this may be the preciſe caſe, perhaps it may be difficult to determine—though mucilaginous materials and acids are ſaid to be beneficial, yet it is highly probable ſome ſpecies of acrimony takes place in the habit, as the fundamental principle of this diſeaſe.

CHARACTERISTIC SIGNS. Febrile affections long continued, having frequent increaſe of violence,

lence, no perceptible intermiſſion, and not terminating in criſis, attended with irregular vaſcular action increaſing often in the day, more ſo in the evening; and generally at the beginning with tenacity, towards the termination, with putreſcency of the blood.

CURE. The indications are, to mitigate febrile affections, and correct the acrimony of the fluids.

If care is taken of this complaint at an early period, and proper advice adminiſtered, a cure may be effected—but, under theſe circumſtances, patients often delay too long, and confide either in their own imaginary knowledge, or the family receipts of ſome humane old woman, till little chance remains for the ſkill of the more judicious; for when the powers of the conſtitution become to be greatly debilitated—the hair falls off—a colliquative diſſolving looſeneſs, night ſweats, and ſwellings of the legs come on—the urine begins to have an oily appearance, and the countenance aſſumes a cadaverous aſpect, becoming thin and ghaſtly, all proſpect of warding off the fatal blow is irrecoverably gone, the patient is got beyond the reach of our art, and death quickly cloſes the fatal ſcene.

In the beginning, where we can be of ſervice, we muſt firſt of all clear *the ſtomach and bowels* by gentle emetics, (No. 11, 12.) and mild aperients, chiefly rhubarb—*abate the febrile heat* by ſmall doſes of Polychreſt ſalt, (265.) and nitre, (273.) and giving ſuch doſes of oil of caſtor, manna, or ſome ſuch like cooling and gently opening medicines, as will keep the body free from coſtiveneſs, (264, 265.)—*in order to ſheath the acrimony of fluids*, we muſt have recourſe to demulcents,

(290.)

(290.) emollients, (216.) and particularly, which will be more effectual, to a well-regulated diet and regimen.

The food ſhould conſiſt of chicken broth, jellies, and if the ſtomach will bear them, oyſters—milk, particularly women's or aſs'—goat's whey—butter-milk, with Briſtol or Seltzer water. The patient ſhould live in a clear country air, on a dry ſoil; keep cheerful company; ride conſtantly on horſeback, or travel from place to place—or he ſhould take a voyage to ſea, or ſail every day, for that has been known to ſave numbers in the beginning of this diſeaſe, and ſome who were rather advanced; but to all it affords great relief. And at the ſame time, with intent to keep up the tone of the ſyſtem, mild aſtringents, ſlight infuſions of bark, one ounce and an half, with ten drops of dilute vitriolic acid may be given twice a day, or two or three ounces of tincture of roſes alſo; three or four drams of the conſerve may be mixed with ſix or eight ounces of milk, and taken two or three times, or oftener, in the day;—as for common drink, they ſhould uſe barley-water, decoction of marſh-mallows, linſeed-tea, or that of colts-foot. Briſtol water has been eſteemed highly ſerviceable; but it is often deferred too late. In the earlieſt ſtages of this diſeaſe it ſhould be applied to, for in them it promiſes to be of the moſt eſſential ſervice, little, as we have before remarked, being capable of being done in the more advanced or latter periods.

SECT.

SECTION XII.

ERUPTIVE FEVERS.

SO called from the Latin word *erumpo*, to break out, and alſo in medical language EXANTHEMATOUS, from the Greek word *exanthema*, puſtula, a puſtule, becauſe theſe eruptions make their appearance on the ſurface of the ſkin—and this is done by the effort of nature to throw out ſome matter offenſive to the conſtitution, which was creative of diſeaſe.

Now, though theſe partake of the nature of ſome of thoſe we have mentioned in Section 8th, ſtill they derive their names from the eruptions with which they are conſtantly accompanied, and of theſe there are ſeveral ſpecies and varieties—of which we ſhall treat ſeparately, becauſe they require different modes of management, according to the different effects they produce upon the conſtitution.

And theſe effects will be aſſiſted or alleviated, by attending more to the habit of the patient than to the ſpecific nature of the morbid particles which produce them; for we know nothing of the materials, or the parts of which theſe particles are formed, conſequently cannot be able to find out any ſpecific remedy which can correct them, ſo that the diſeaſe, of which they are the ſource, may be ſubdued, by weakening or deſtroying the power inherent in themſelves.

Therefore, in all our medical exertions, we attempt only to prevent the ill conſequences they are likely to produce,

produce, by ſo guarding the conſtitution, that nature may be empowered to ſeparate and throw out what would, if ſuffered to remain, prove fatal to the human machine, either by producing immediate death, or bringing on other maladies which would in time have a ſimilar termination.

Now all theſe fevers of which we are going to treat are eſteemed infectious, conſequently contagious; for theſe two terms are uſed ſynonimouſly by the moſt learned authorities. Notwithwithſtanding which, I would endeavour to make ſome diſcrimination between them, and am warranted in the attempt, if any the leaſt benefit can be derived to ſociety by the obſervance of ſuch a diſtinction; to prove which, I aſſert, that there are ſome diſeaſes which are acquired by the particles of morbid matter floating in the circumambient atmoſphere, either from that matter being inhaled by the lungs, impregnating what we eat or drink; or abſorbed by the inhaling veſſels of the ſkin, noſe, or fauces, whilſt others are communicated from contact alone—hence the former of theſe I would term *infectious*, the latter *contagious*; and for this reaſon the modes of prevention would be different—for in a country or town where the firſt was rife, quitting thoſe places is abſolutely neceſſary; but where the laſt, cautious reſidence in the ſame is ſufficient, avoiding commerce with perſons ſo contaminated; or touching any materials, which are capable of retaining the contagious matter, that have by them been uſed or handled. Beſides, in this country, it ſhews, in caſes of the plague, the ſecurity in drawing lines of circumvalla-

tion to prevent its progreſs; indeed other modes, from this idea, might be found out to be of great utility under theſe unhappy circumſtances. Supported by theſe reaſons, I ſhall beg leave to preſerve the difference between the two terms, and proceed to treat on eruptive fevers from infection; and, firſt, on the

§ 1. Small-Pox, or Pocks.

Becauſe we call a ſingle puſtule *pock*—this ſeems to be derived from the Saxon word *pocca*, pocket, or the French *poche*, a ſmall bag. The Latins gave the diſeaſe the term *variolæ*, becauſe from the eruptions it altered the appearance of the ſkin.

This complaint is occaſioned by morbid matter of a peculiar nature abſorbed into the habit from the external air, from contact of a perſon infected, or from inoculation, either by the inhaling veſſels of the ſkin, lungs, membranes of the noſe and mouth, or firſt paſſages—and has been divided agreeable to the cuticular appearances, into diſtinct, confluent, coherent—or into common, *cryſtalline* eruptions full of thin ſerous matter—*verrucous*, reſembling warts—or *bloody*, filled with red fluid, or blood in a broken ſtate.

However generally now we adhere to the terms *diſtinct* and *confluent*; but this ſeems of little uſe in practice; for they may be diſtinct, yet of a very bad kind; and confluent, yet very good; therefore the more eligible diviſion appears to be into *ſimple* and *malignant*—the firſt comprehending thoſe which are the leaſt, the laſt, thoſe which are the moſt dangerous.

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This diſeaſe has four ſtages: the firſt, the *febrile*, which continues three days—2d, the *eruptive*, two days—3d, the *ſuppurative*, five or ſeven—4th, the *exſiccative*, or ſtage in which the puſtules dry, two or four days---or ſometimes another fever comes on, called the *ſecondary*.

DESCRIPTION. It generally commences with thoſe of an inflammatory fever, from whence the particles of the morbid virus are conſidered not only highly ſubtilized, but inflammatory and ſtimulant, attended with nauſea or vomiting---pain in the head and back ---tightneſs about the pit of the ſtomach---the patients are very drowſy, ſometimes delirious---in grown people often ſweats break out on the firſt days, and infants are apt to be ſeized with convulſions---the ſkin though, in general, is rather moiſt and ſoft---the upper orifice of the ſtomach ſometimes acutely painful, and alſo the ſides.

Theſe ſymptoms continue three or four days, on which appear ſmall red ſpecks like flea-bites; which, when preſſed with the finger, may be felt hard in the ſkin, and thus may be diſtinguiſhed from other eruptions, particularly the meaſles, which, on their firſt appearance, are very ſeldom ſo hard, or can be felt in this manner, as not elevating the cuticle ſo much; firſt on the face, and ſcattered on the hands, neck, and breaſt; and with theſe commences *the ſecond ſtage*; from which period the puſtules keep continually increaſing, and diffuſing themſelves over every part of the body; at which time the fever goes off when the eruption is completed; af-

ter

ter this they inflame, begin to be prominent above the ſkin, are painful, hot, and fill about the fifth day; and have round their baſis a circular florid redneſs—the throat alſo is painful, and inflamed commonly—the face begins to ſwell and puff up, for the moſt part, on the ſeventh day, ſo much, that they generally cloſe the eyes, and occaſion blindneſs.

At this period, the commencement of *the third ſtage*, as if from external irritation, ſoliciting the perfect and complete diſcharge of morbid matter, freſh febrile ſymptoms ariſe, which continue to the ninth, tenth, or eleventh day, according to the ſeverity of the diſeaſe, or quantity of the eruption. The puſtules having acquired their full ſize, moſt of them as big as peaſe, are filled with a whitiſh or yellowiſh matter;—this concludes the third ſtage; and then the matter oozes out at the top of the eruptions, dries, turns of a dark colour, and forms hard ſcabs, and this in the ſame order in which they made their appearance—and, as the face ſubſides, the feet and hands ſwell, and ſubſide not totally till the fourteenth day, at which period the diſeaſe is conſidered to have completely finiſhed its courſe, which forms the concluſion of *the fourth ſtage*.

This is in general the progreſs of the ſimple or mild ſpecies—though ſometimes another fever, called SECONDARY, will come on, when the eruptions have run ſo together, that they form one uniform cruſt, and by that means obſtruct perſpiration; ſo that, inſtead of the quantity of variolous matter paſſing out of the habit, it is again re-abſorbed, and the inteſtines are loaded with an offenſive collection of acrid materials, which

create

create a fever of the remittent claſs that often proves fatal.

But in the confluent ſort there are ſome peculiarities which ought to be ſpecified; and, therefore, we muſt obſerve, that in theſe the puſtules break out ſooner, on the ſecond or third day; the febrile ſymptoms run on with a greater degree of violence--and on the appearance of the eruptions, or a day or two after, which happens now and then in the diſtinct ſort, a *ſpitting* will come on, gradually increaſing to a ſalivation in grown people—in infants a *looſeneſs* ſupplies the place—though in common the attendant fever of the ſmall-pox is of the inflammatory kind, yet, in the more complicated ſort, the fever aſſumes a different type, and puts on the appearance either of, 1ſt, an *inflammatory remittent*---2dly, *nervous*---3dly, *putrid fever*---or is aſſociated, 4thly, *with ſymptoms of a dyſentery.*

In the first, the febrile affections run very high, with exceſſive heat, and great proſtration of ſtrength—the ſkin is dry and hot—the arteries, called carotids, running through the neck into the ſuperior parts, throb—the tendons (9.) grow ſtiff—the eyes are bright, vivid, and full of blood—the head and loins are painful, often without any delirium or drowſy diſpoſition—when the eruption is finiſhed, if the patient dies not before the completion, which, from the violence of the fever, is ſometimes the caſe, the head-ach, pain in the loins, vomiting, and other ſymptoms, are relieved; but the fever revives its former force, or continues, and has increaſe of febrile affections every thirty-ſix hours—hence termed *tertian*;---at this period there ariſe want

of

of ſleep, delirium, anxiety---there alſo come on bleeding of the noſe, copious ſweats---then heat, and dryneſs of the ſkin---very often miliary eruptions break out in ſpaces between the puſtules, or ſmall purple ſpots like flea-bit ---ſometimes an eryſipelatous inflammation will occupy the head and face, and occaſion a large inflammatory ſwelling---the febrile and other ſymptoms increaſe in the ſuppurating ſtate, with toſſing and delirium---the puſtules ſubſide not, nor ſeem to be of a very bad ſort---ſometimes though they grow black and mortify—then the patients lie in a ſtate of apparent ſleep, and convulſions cloſe the ſcene.

In the second, at the commencement, there is great proſtration of ſtrength, lowneſs of ſpirits, obſcure febrile ſymptoms, extreme naufea, ſickneſs, and oppreſſion.

The puſtules never puſh forth perfectly, nor maturate kindly, but many lurk in the ſkin; and thoſe which elevate themſelves a little above it, are flat and depreſſed, containing a thin aqueous fluid, and have a ſmall black ſpot in the middle—the face, when the eruption is copious and runs together, never ſwells, but looks as if covered with a yellowiſh ſkin, ſomething like a macerated bladder of that colour.

A thin ſerous looſeneſs generally comes on—if not, convulſions put a period to the unfortunate patient's exiſtence.

In the third, the ſymptoms preceding the eruptions are nearly ſimilar to the former; but the puſtules are black; the bottoms of which are in a mortified ſtate; indeed, the texture of the blood is ſo broken by

the putreſcent acrimony, that it runs off by urine, and various other hæmorrhages; the ſpaces between the puſtules are black, and large broad ſpots, called vibices, or ſmall ones, like flea-bites, are formed on the ſkin; beſides, the red portion of the blood not only mixes with the ſerum, and fills the eruption, but it raiſes large bliſters elſewhere.

Theſe puſtules, which are only a little elevated, beginning to appear upon the ſecond day, are black; the urine, for the moſt part, is bloody; as are alſo the ſtools, ſpittings, vomitings, and in ſome even the tears; the fever is violent, and the febrile fits almoſt inſupportable.

IN THE FOURTH, which was called DYSENTERIC, becauſe it happened in the year 1670, at the time of the epidemic dyſentery, and partook, in ſome degree, of its nature; or, becauſe the matter of the ſmall-pox was often thrown out of the conſtitution by inteſtinal evacuation, when treated by the warm regimen, not uncommon in thoſe days.

In this the eruption does not occur, as in the mild ſort, on the fourth, but on the third day; the puſtules are of a leſs ſize always, and are ſharper, or more pointed at the top, and grow blackiſh towards the concluſion—beſides, a copious diſcharge of ſaliva, as in the confluent kind, is often a concomitant. Should the acrimony of the putrid, which produces the alvine flux, that forms the characteriſtic ſign of this ſpecies of ſmall-pox, be very copious and active, occaſioning the diſcharge to be violent, it almoſt always proves mortal.

CAUSES.

CAUSES. The *remote* or *inducing* of this, as well as of every other ſpecies of infectious or contagious fever, is a prediſpoſition, or peculiarity of the conſtitution to feel the impreſſions made by the morbid matter, productive of diſtreſs in the moving ſolids, and alteration of the fluids of the machine.

The *proximate* or *immediate*, contaminating particles, peculiar to the ſmall-pox, abſorbed into the habits, and theſe producing febrile effects, which vary according to the nature, or particular ſtate of the conſtitution at that time.

CHARACTERISTIC SIGNS. The only certain ones are the eruptions themſelves, with their progreſſive concomitant ſymptoms, the appearance of which may be ſuſpected in the firſt ſtage, if the attack ſhould be ſudden—if the ſmall-pox ſhould be the reigning epidemic, or the patient ſo ſituated, that he has been thrown in the way of this ſpecific infection—if pain ſhould affect the back part of the head, fauces, loins, particularly the pit of the ſtomach, attended with vomiting, and that pain increaſed on preſſure.

CURE. The indications are, to diminiſh the aſſimilating or contaminating power of the morbid matter, and keep the fever within ſuch bounds, that nature ſhall be enabled to ſeparate from, and throw out of the habit the offenſive materials that cauſe the diſtreſs, which is done by ſo regulating the motions of the nervous and vaſcular ſyſtems, that the conſtitution may be put into a ſtate to mitigate and ſupport the ſucceeding conteſt with the greateſt eaſe, and freedom from danger,

And this knowledge we ſhall acquire, by conſidering the ſituation of the habit, the mode of living, and ſeaſon of the year, with reſpect to the weather or conſtitution of the air, as theſe will diſpoſe more or leſs to the production of inflammatory, nervous, or putreſcent febrile affections; for I am certain, that, according to the nature of the fever, ſo are we to regulate our conduct, and hence obſerve thoſe rules which have been previouſly laid down in the management of thoſe different fevers ſpecified in our eighth and ninth ſections.

Sometimes the diſeaſe is ſo extremely mild, that there is no need of medical aſſiſtance, though at the cloſe, in order to clear the firſt paſſages from any foulneſs or offenſive matter which may have been collected there during the progreſs of the complaint, it would be right to give two or three purges. (No. 3. 19 to 24.)

At others, it is of a very dangerous nature, and requires the aſſiſtance and ſagacity of no ſmall ſhare of medical knowledge, as it is accompanied with ſuch a variety of threatening ſymptoms.

Should the ſmall-pox attack ſtrong, hale, robuſt habits, where inflammatory ſymptoms run high, which they ſometimes do to ſuch a degree, as to affect the brain, throat, or lungs, ſo as to produce delirium, ſuffocation, and extreme difficulty of breathing; according to the violence of the ſymptoms we muſt have recourſe to bleeding, and that repeated, if they give not way to the firſt operation—indeed, if the pulſe is hard and full; the heat conſiderably above the natural ſtandard; the urine high-coloured; the pain in the head, back, and loins acute; the bleeding at the beginning

ſhould

ſhould be copious—and, under theſe circumſtances, blood may be taken even at the height, or any intermediate ſtage—we may alſo give antimonials, nitrous and cooling medicines, and ſuch other things as have been adviſed in cure of inflammatory fevers, (328, &c.) for the ſame reaſons.

If the head ſhould be violently affected, the feet may be bathed in warm water, and warm fomentations, or poultices, applied to them; for theſe will ſolicit a freer circulation downwards, a more copious eruption into the extremities, and diminiſh the quantity of variolous matter, which otherwiſe would appear in the more ſuperior parts.

After once or twice bleeding, a gentle emetic, (No. 11, 12. 38.) would be uſeful, and clearing the firſt paſſages with ſome mild aperient, (No. 3. 22 to 24.) or at leaſt repeated glyſters every, or every other day, (No. 25, 26.)

By the means above directed, we reduce the active power of the ſyſtem, that it may not be hindered from throwing off the matter of the ſmall-pox, by the too great diſturbance and diſtreſs occaſioned by the rapidity and violence of febrile action.

But ſhould the train of ſymptoms be ſuch as indicate the preſence of a *nervous fever*, (335.) we muſt endeavour to rouſe the vaſcular motions, and increaſe the activity of the nervous ſyſtem, in the manner we have directed in nervous fever, (338.) for, without this, there will only be a partial ſeparation of the variolous matter thrown out upon the ſurface of the body; and the internal parts, ſuch as the brain, ſtomach, lungs, and bowels,

be more loaded, and the fluids not perfectly free from morbid particles. To obviate theſe inconveniencies, we muſt *not* do any thing that is likely to turn the humours upon the bowels, nor take away any blood; for theſe would weaken the ſyſtem, already in too debilitated a ſtate, and render the fluids too acrimonious; we muſt try to invigorate the conſtitution, in order that the blood may circulate with proper freedom externally, by wine, wine-whey, volatiles, and cordials, (340.)

The load, nauſea, anxiety, and oppreſſion, which are almoſt always conſtant concomitants in this ſpecies of febrile affection, might be relieved by an emetic, (382.) for the ſhock would tend in ſome degree to rouſe the ſyſtem, and promote the eruption by that means.

Should the fever attendant be of the *putrid kind*, and betray ſymptoms of prevalent putreſcency in the humours, we muſt not have recourſe to the lancet; for bleeding would hurry the conſtitution rapidly into all thoſe miſchiefs which ariſe from extreme debilitated nervous action, and broken texture of the blood, as before explained when treating on putrid fever, (349.) —here we muſt depend upon bark, and ſuch things as were ſpecified when treating on that malady.

In order to promote ſucceſs in treating this complaint, in the beſt manner we can, by procuring a ſeparation and expulſion of the morbid matter, we muſt, indiſputably, pay attention to the preciſe nature of the fever; for it is by properly regulating that from whence we can hope for a perfect and laſting relief.

Particu-

Particular occurrences preſent themſelves frequently, which call for our attention in an eſpecial manner, added to the general plans we have ſpecifically pointed out, in which we muſt attempt to imitate nature in her operations.

When inſenſible perſpiration is too much impeded by the puſtules crowding ſo cloſe together, and obſtructing the pores of the ſkin, ſhe produces either a copious ſpitting, free diſcharge of urine, or looſeneſs, to make up that defect, or lodges the aqueous fluid in part of the cellular membrane (15.) of the hands and feet, which at this time put on dropſical appearances—hence is pointed out to us the neceſſity of ſerous evacuations.

It is therefore incumbent upon us to endeavour to promote the flow of urine from the completion of the eruption to the turn, by the uſe of diuretics; the ſafeſt of which is æthereal ſpirits of nitre, (272.) and taking the patients now and then out of bed, and expoſing them to the cool air.

Small doſes of calomel, under theſe circumſtances, have been attended with ſome ſucceſs, as they often promote a ſpitting, or increaſe the diſcharge of urine; or, ſhould we be afraid of determining the humours too much to the bowels, it may be thrown into the habit in form of ointment, rubbed in above the knee, or on the inſide of the thighs.

But if theſe diſcharges are defective, or ceaſe altogether, and there is no ſwelling in the extremities ſufficient to counterbalance the decreaſed or obſtructed evacuations, the ankles or wriſts muſt be bliſtered, by

inſinuating ſome bliſtering ointment into the ſpaces between the puſtules—and if this ſucceeds, by creating a free diſcharge, the danger which before threatened may be happily prevented—if not, we ſhall have reaſon to fear a fatal concluſion.

Sometimes reſtleſſneſs will be occaſioned, and the febrile ſymptoms increaſed, by irritation on the ſurface of the body, creating pain, as the puſtules proceed to perfect maturation and dryneſs—here opiates, (231.) (No. 4, 5.) procure eaſe and ſleep, forward ſuppuration, expedite ſeparation and expulſion, by preventing internal diſturbance in the ſyſtem from the cauſes above ſpecified. But, perhaps, by their uſe the body may be rendered coſtive; or if ſo, at this period, from any other cauſe, gentle aperient medicines have been recommended; but glyſters, (No. 25, 26.) every day till the dryneſs of the pocks takes place, are more eligible, as from them there can be no danger of creating the ſmalleſt diſturbance in the habit, nor of determining the fluids too much to the inteſtines, ſo as to run the leaſt riſque of inducing a looſeneſs; and they will alſo effectually aſſiſt in preventing an increaſe of febrile diſtreſs, which might ariſe from collections of acrimonious matters in the firſt paſſages.

Sometimes after the incruſtation is perfectly formed, from the reſorption of pus, offenſive acrid matters in the firſt paſſages, or the abſorption of acrimonious or fœtid particles from foul linen, the ſecondary fever is apt to ariſe. In order to prevent which, the patient ſhould have his linen changed, be put into freſh ſheets well aired, every thing be removed from him which

can be ſuppoſed to harbour offenſive matter, and a purge, (260, &c.) (No. 19 to 22.) given as ſoon as the cruſt is actually formed.

Though ſome have conjectured, with equal if not with more probability, that this fever ariſes from the imperfect ſeparation or expulſion of the variolous matter, and that it becomes the inſtrument of nature to free the habit from what remains.

However, be the caſe which it may, if it runs high, and is attended with violent head-ach, great oppreſſion, and difficulty of breathing, bleeding may be neceſſary, and ſo long as the pulſe can ſupport the operation well, it may be repeated—bliſters ſhould afterwards be applied---and purgatives adminiſtered, if the the pulſe does not flag---and vegetable acids ſhould be mixed with common drinks---but ſhould the ſtrength fail, we muſt have recourſe to cordials.

If it goes not off by theſe means, it will, in all probability, put on the appearance of a remittent fever, and as ſuch muſt be conſidered---for the ſubduction of which, we muſt, as in caſes of thoſe fevers before ſpecified, (391.) apply to the bark, (392.) and with reſpect to the quantity to be applied, the age of the patient, and violence of the diſeaſe, muſt regulate our judgement.

Some, in order to mitigate or prevent this fever, have adviſed the puſtules, as ſoon as they are fully maturated, where they are of the confluent kind, to be opened as they ripen, in the order they make their appearance. I am, however, far at preſent from recommending the adoption of ſuch a plan, as I ſhould be

fearful

fearful of the moſt dangerous conſequences enſuing from ſuch a practice, particularly where the fever, after the eruption, ſtill continued with any degree of force; for it is very probable that, from thence, there is not a due ſeparation of the morbid materials, and that the *ſecondary fever* is very often, at leaſt, *an effort of nature* to throw what remains out of the habit---and that by the irritation on the ſkin this purpoſe might better be effected, than by its being taken off; for from ſuch attempts, there has been reaſon to believe death the conſequence. Much miſchief has accrued from applications made to gouty limbs, from the impetuoſity of the ſufferers to take off the pain ariſing from that cauſe, before the whole of the gouty matter had been depoſited; and in theſe two caſes the reaſoning is nearly ſimilar, as well as ſome others; and it is well known, that nature frequently makes pain ariſing from ſome irritating power the ſole cauſe of conſtitutional relief. I would therefore adviſe great circumſpection on the preſent point, which only can be warranted by practical certainty, not whimſical, though ingenious, conjecture.

Sometimes the ſmall-pox will be attended with a remittent fever, (387, &c.) verging to the inflammatory claſs; then the diſeaſe muſt be treated in the ſame manner as we have delivered when treating on that fever. (327.) (See 391.)

Sometimes the eruptions will put on different appearances, (413.) which from thence are called CRYSTALLINE, and be attended with a nervous fever; in this caſe, therefore, we chiefly depend on bliſters and

vinous

vinous cordials, with ſuch other aids as we have ſpecified in the treatment of the ſlow nervous fever, (338.) Or SANGUINEOUS or BLOODY, and have for their concomitant a putrid fever; in which caſe, without ſome ſervice can be done in the beginning, not one ray of hope remains for our ſucceſs—for which purpoſe we muſt depend upon bark, and ſuch other antiſeptics, (298.) as are ſuppoſed to have the moſt powerful and immediate action, the principal of which is alum, (206, &c.) (No. 56.) and purſue the mode of management throughout, as recommended in the putrid fever. (349.)

Or, they are attended with extreme pain, and violent flux from the bowels, putting on the appearance of dyſentery, (418.)---in this caſe we muſt endeavour to retard the flux, by ſome gentle cordial antacids, of the ſhell or earthy kind, (296.) called abſorbents, (No. 42, 43.) or the white decoction, with red port or claret, or aſtringent draughts. (No. 75, 76.)

But in this complaint much nicety is required---for alvine fluxes are not always to be conſidered morbid, they are ſometimes critical, and the means of which nature makes uſe to carry morbid virus out of the habit ---if, therefore, the pulſe does not ſink, but continues to move with ſtrength and greater freedom, and the oppreſſive ſymptoms are all alleviated, the uſe of aſtringents ſhould be cautiouſly adminiſtered. It would be more adviſable, to ſupport the patient by mild cordials, and exhibit ſuch medicines as would ſheath the bowels, and ſuffer the matter to paſs through them with the leaſt uneaſineſs---ſmall doſes of ipecacoanha, (No. 57.) will be beneficial, and preparations from the

the claſs of the demulcents, as mixtures of gum tragacanth, Arabic, ſtarch, and ſuch like; and, towards the concluſion, opiates, joined with ſome of the mild aſtringents, might be uſed. (No. 77, 78.)

With regard to the diet, it is always to be adapted to the nature of the fever, during its continuance, which may be collected from what has been ſaid on this head, when treating of the inflammatory, nervous, and putrid fevers. The apartments muſt be kept cool, and the patients ſit up ſome hours every day, if the circumſtances of their caſe will permit---and after the complaint has finiſhed its courſe, purgatives ſhould, at proper intervals, be repeated, to clear the habit of any remains of morbid particles; and the ſame courſe purſued for the recovery of the ſtrength, as after the concluſion of other fevers, where the conſtitution has been much haraſſed.

Long experience have enabled practitioners to make the following obſervations reſpecting the good and bad omens in this diſeaſe:

The *later the ſmall-pox make their appearance in winter* the leſs dangerous they will be---they are alſo *more mild in the young ſubject than the ſtrong adult*—the *longer the firſt*, or *febrile ſtage*, continues before the eruption, ſo much more mild; *the ſhorter*, ſo much the more violent may we expect the diſeaſe to be---ſhould there be *an acute pain in the ſide*, or *in the upper orifice of the ſtomach*, they are bad ſigns---the *more the puſtules crowd together, the more numerous they are in the face and trunk of the body; the more flat or depreſſed, the ſlighter the remiſſion in the ſecond, or eruptive ſtage*, ſo much greater will be

be the danger---a *delirium ſucceeding the eruption* imports no little miſchief---*deficiency of the ſalivary diſcharge*, in the depreſſed or confluent ſort, is one of the worſt ſymptoms---the *more florid the ſpaces between the puſtules are*, the greater may be our hope; *paleneſs* there affords us no flattering proſpect.

If the *matter in the puſtules be white, viſcid, and full*, it is a fortunate appearance; but if, on the contrary, it ſhould be *brown and thin, and the puſtules grow yellow, or have their tops indented*, it is the reverſe---if the *ſpaces between the puſtules, and they themſelves*, are livid, death is at hand.

It is alſo a bad omen *if the ſecondary fever appears before the retroceſſion of the puſtules---if the face ſubſides, and the ſalivation or ſpitting ceaſes, and the hands and arms ſwell not in the ſame proportion*, in the confluent ſort, it is a ſign of death.

If, on account of being too heated, the *patient cannot bear the bed-cloaths upon him*, it portends a delirium---*great inflammation of the fauces, quickneſs in breathing, clear urine, with little cloudineſs floating in it, grinding of the teeth, picking of the flocks from the bed-cloaths*, threaten diſſolution---nor are we to build any hopes on the remiſſion of delirium, *if the fever continues in the ſame ſtate.*

Before we cloſe this part of our ſubject, we muſt beg leave to make one general obſervation reſpecting all eruptive fevers, as well as the ſmall-pox---that as many, though their eruptions ariſe from the conſequence of their peculiar action on the conſtitution, and produce ſpecific cuticular appearances, are uſhered in by

by ſome fever, either of the inflammatory, nervous, or putrid kind, in general; yet, ſhould they be attended, as ſometimes they are, with thoſe of the mixed claſs, where we cannot perfectly diſtinguiſh to which of the more ſimple ſort they belong, we muſt treat them according to the ideas given in the mixed fevers. (371, &c.)

§ 2. Inoculated Small-pox.

It is rather ſingular, that after ſo many years experience of the advantages accruing from inoculation, that there ſhould remain any ſo blinded to their own intereſt and happineſs, as to be deſirous ſtill of abrogating the practice---which is the preſerver of life, beauty, and health, ſo perfectly clear to common obſervation.

The mere recital of the benefits annexed to it are ſo conſpicuous, that reaſoning is unneceſſary.

It ſupplies us with the opportunity of having the body properly prepared for the reception of the morbid matter; ſo that it may be freed from ſuch materials as would ſupply an active cauſe to increaſe and prolong febrile affections; and thus prevent the fever, which always attends in the ſmall-pox, from running too high, or producing otherwiſe dangerous effects, according to the nature of the conſtitution---it occaſions a ſmaller quantity of eruptions, and the puſtules to be more ſuperficial---hence not leaving thoſe deep pits, and often unſeemly ſcars, as in the natural ſmall-pox---it ſupplies us with a knowledge of the diſeaſe at the firſt onſet, and enables us to provide againſt its conſequences ---it impowers us to throw in the matter into the conſtitution

tution from places far diſtant from the vital parts, and prevents the lungs being primarily affected---and, what is of great conſequence, it enables patients to eſcape from the ſecondary fever, ſo fatal to numbers; for in the artificial ſort it rarely attends---add to this, the operation is ſo extremely trifling, that it is performed almoſt without the ſlighteſt pain, in the following manner:

The ſcarf-ſkin, of one or both arms, is elevated by a lancet, upon which ſome of the infectious matter, taken from a patient labouring under the ſmall-pox, remains, then preſſing the ſcarf-ſkin upon the lancet, and withdrawing it from under that preſſure, the variolous matter is left upon the true ſkin, and taken into the habit by the abſorbent inhaling veſſels, which open upon its ſurface.

Subjects of every age may be inoculated, even ſuch as are at the breaſt; by ſome eſteemed the beſt time of life; but it ſhould be before they begin to cut their teeth—certainly their conſtitutions are at that time in the moſt proper ſtate—and, could we be aſſured that no accident would occur that might need the aid of medicine, there could not be a moment's heſitation reſpecting the preference; but, on this account, I ſhould rather recommend inoculating at two years old, when complaints could not ariſe from teething when the conſtitution was not in ſo irritable a ſtate as to be inconvenienced by ſlight cauſes—and, in caſes of neceſſity, ſhould they ariſe, the application of medicines would be leſs reſiſted.

With

With regard to the ſeaſon, practitioners have differed in that point—the hot months in ſummer I conſider as the moſt exceptionable, and give the preference to thoſe which are the moſt temperate—the ſpring, or latter part of autumn, taking care, during theſe periods, to avoid performing the operation when inflammatory or putrid fevers or other acute complaints were epidemic, for very obvious reaſons.

The modes of preparation ſhould be adapted to the conſtitution of the patient.

Generally living cool and temperate for three weeks, feeding on aceſcent food, with now and then a gentle mercurial purgative, for thoſe of healthful habits, will in common be ſufficient—but thoſe of puny conſtitutions, whoſe ſyſtem is relaxed, ſhould live more freely. and be allowed animal food once every day, of the light and eaſily digeſtible kind, and in moderate quantity, mixed with aceſcent vegetables.

In fine, preſerving the conſtitution in a moderate degree of ſtrength, clearing the firſt paſſages, removing glandular obſtructions, making that ſyſtem act with freedom, and loading the machine, as much as may be, with aceſcent fluids, ſeems the moſt rational mode of putting the body into the beſt ſtate.

By theſe means, the nervous and vaſcular ſyſtem will be enabled to perform their functions properly, and the humours not become prone to run into an acrimonious or putreſcent ſtate—hence nature will not meet with any impediment to prevent her from ſeparating and throwing out the offenſive matter, after it has produced its effects on the maſs of circulating fluids.

It has been thought, and I am of opinion, rightly, that it is immaterial from what ſort of ſmall-pox the inoculating matter is taken, as the different kinds produced depend not upon the nature of the morbid particles, but the conſtitution into which it is thrown—for there will be a bad ſort ariſe from matter that has every mark of mildneſs, and a good ſort from ſuch as appears more of a malignant nature; nay, indeed, different people inoculated with the ſame matter taken from the ſame puſtule, have been known, and that commonly, to have different ſorts of the ſmall-pox.

However, I would always adviſe it to be taken from ſuch ſubjects as labour under the diſeaſe in its mildeſt ſtate, and have the moſt favourable appearing pus—for it is our buſineſs to take matter from thoſe conſtitutions which, by the appearance of the pocks, beſpeak the greateſt purity, and freedom from any other morbid taint—for all people are not agreed upon what the malignity of this complaint depends; and many conclude that other diſorders may be inoculated with the ſmall-pox—theſe, therefore, furniſh arguments ſufficient for great cautions in our election.

DESCRIPTION. After the punctures are made in the arms, on the ſecond day, if the parts are examined by a good magnifying glaſs, there appears commonly about the puncture an orange-coloured ſtain, whilſt the ſkin around it ſeems to contract; but ſometimes an inflammation takes place on the ſecond day, then diſappears totally—this, though, may ariſe from irritation from the puncture, trifling as it is; we remain, therefore, doubtful whether or not infection has taken place—but

if it has ſucceeded, on the fourth or fifth day from the operation, a hardneſs and itching, with an apparent inflammation of the part, is perceptible; and a kind of bliſter, filled with a tranſparent liquid, is obſervable.

On the ſixth day, a pain and ſtiffneſs affects the armpits.

On the ſeventh, but *more frequently* upon the eighth, ſymptoms which precede the eruption make their appearance; and theſe are commonly ſuch as ſhew themſelves in general at the commencement of fevers—cold chills and heat alternate with each other, a ſlight degree of languor, heavineſs of the eyes, and ſlight pains in the head and back, are, now and then, perceptible; and theſe remain pretty conſtant till the ſmall-pox manifeſt themſelves.

The inflammation now begins to ſpread very faſt, and, round the punctured part, a great number of ſmall eruptions may be ſeen crowding together, which increaſe during the courſe of the diſeaſe.

Surrounding the inciſion, and extending itſelf half way round the arm, but more commonly deſcribing the breadth of a ſhilling, a circular, or oval efflorescence is obſervable. The larger this inflammatory appearance is, which is ſmooth to the touch, and not painful, the fewer are the general puſtular eruptions—and, indeed, I have obſerved, when the thread was made uſe of, this was the caſe, if the diſcharge from the inciſion was very copious—now all the ſymptoms ceaſe, and the buſineſs ſeems to be perfectly finiſhed.

UNFAVOURABLE SYMPTOMS. Though this is the progreſs of the diſeaſe in general, yet it ſometimes

ſometimes happens that there are deviations, and that we have not inflammatory appearances on the wounded arm till the eighth day, then it will ſuddenly ſhew itſelf, with the other concomitant ſymptoms—this is not recorded as a favourable omen—ſtill it ſometimes is in this point deceptive.

But if the colour around the puncture continues pale, though it is barely perceptible that inoculation has ſucceeded, inſtead of becoming red or inflamed—if the edges of the wound ſpread but little, and remain flat, unattended with itching, or any kind of uneaſineſs—if, inſtead of a red inflammation about the inciſion, it ſhould have a purpliſh caſt; if red, and the circle round the puncture ſhould be narrow and deep, and the incruſtation around it ſhould be depreſſed and concave in the center, they are conſidered us unfavourable ſigns.

FAVOURABLE SIGNS. On the other hand, if on the ſecond day there ſhould be an orange-coloured ſtain round the inciſion—an itching there in two or three days—a kind of elevation of the ſcarf-ſkin, reſembling a bliſter, without much inflammation, on the third or fourth day—a pain or ſtiffneſs in the pit of the arm, a large efflorescence round the puncture, on the tenth or eleventh day, or ſooner—a hardneſs ſpreading circularly from the puncture, the inflamed part of the arm elevating itſelf, and forming a point, terminating in a dry ſcab—theſe are ſaid to form very pleaſing prognoſtics, and flatter us with the moſt agreeable expectations of a happy concluſion.

CAUSES. Theſe are ſimilar to what we have before recited in the ſmall-pox—for if the conſtitution is not poſſeſſed of the prediſpoſing cauſe, no effect will be produced, though the variolous matter ſhould be thrown into the habit.

CURE. In the evening after the puncture is made, it hath been thought adviſeable to give a few grains of the calomel powder, as much as will procure two or three evacuations, purging it off in the morning with with ſome gentle cathartic. (No. 79, 80.)

Or, inſtead of the laſt, a doſe of Glauber's or Polychreſt ſalt, proportioned to the age and conſtitution of the patient—theſe are adviſed to be given every ſecond morning and evening, till the appearance of the eruption. This is ſuperfluous, two doſes will be in all common caſes ſufficient, immediately after the operation, and a day or two before the attack. If the inflammation is ſlight at the puncture, the doſe of calomel muſt be increaſed.

Afterwards we have nothing to do but to guard againſt the febrile ſymptoms, which are in general ſo mild, that there is little occaſion for medicine.

At the commencement, if neceſſary, what has been juſt above preſcribed are adviſed; and repeated two or three times, if the diſeaſe appears to be of a late or unfavourable ſort.

In the intermediate days, ſhould the fever run high, Clutton's febrifuge ſpirit, or the æthereal ſpirit of vitriol dropt into any aqueous fluid, ſo as to make it agreeable, may be taken often in the day.

As

As ſoon as the ſymptoms of the eruptive fever come on, the patients ſhould continue to be expoſed to the cool air as much as poſſible; for it is the beſt cordial and corrector of febrile affection in this caſe, as I have repeatedly experienced. Indeed, when the febrile ſymptoms appear to be violent at the onſet, great good has occurred from the adminiſtration of an antimonial emetic and purgative.

Where the fever appears to be languid, and the patients are of weak and delicate conſtitutions, ſome caution is here neceſſary; for theſe, perhaps, it will be ſufficient to be kept in a large well ventilated room, eſpecially if the weather ſhould be very cold; and they ſhould be ſupported on ſomething of a more cordial and ſtimulating nature, than if things were otherwiſe, and the patients more robuſt, who ſhould be kept, during the eruption, on a mere aceſcent diet.

After the eruptive ſtate is over, and the puſtules begin to maturate, ſmall broths, jellies, white wine whey, or ſuch like materials, may be allowed.

In this ſtate of the diſeaſe, the weakly and more delicate may require to be kept in bed, and ſupplied with more cordial applications, in order to perfect the ſuppuration of the puſtules, and totally free the conſtitution from any remains of the variolous matter.

If we proceed in this prudent manner, adapting our mode to the particular conſtitution of our patient, we ſhall very ſeldom have much trouble; but ſhould there ariſe uncommon complaints now and then in the inoculated ſmall-pox, it will be neceſſary for us to proceed as directed in the natural diſeaſe, (413, &c.) obſer-

ving whether it verges to the nature of inflammatory nervous, putrid, or mixed fever, and conduct ourſelves conſiſtent with what the ſymptoms point out to our judgement.

§ 3. MEAZLES.

Called by the Latins *morbilli*, as being a diſeaſe of leſs conſequence than the ſmall-pox; as by *morbillus*, we underſtand *morbus parvus*, a trifling diſeaſe—they have alſo been named *rubeolæ* and *roſeolæ*, from the redneſs attending the eruption, or putting on a colour ſimilar to roſes—like the ſmall-pox, this diſeaſe appears to be a native of the Eaſt, and has certainly a great affinity with that complaint, as they are both generally of an inflammatory nature, equally infectious, and never affect the conſtitution twice—ſome authors ſay, *except very rarely indeed*—becauſe the habit cannot be brought a ſecond time into ſuch a ſtate, as to feel the effects of either of theſe infectious particles, ſo as to reproduce the diſeaſe, ſhould they circulate ever ſo plentifully in the fluids a ſecond time.

They generally make their appearance in the month of January, rage moſt violently about the vernal equinox, and diſappear in July.

They commonly attack children; but all conſtitutions, which have never before felt their influence, are the objects of this infection—hence, in the more advanced ſtages of life, many are with them afflicted—they are propagated by the particular conſtitution of the air, and become highly epidemic.

Some

Some have conſidered the attendant fever of the ſimple inflammatory ſort; others as a catarrhal, or inflammatory remittent; ſome ſay it is of the peripneumonic kind, and conceive the eruption, not as critical, but ſymptomatic, as the cough and affections of the lungs will remain after that is over.

According to my conception, it is in general a febrile diſeaſe of the inflammatory kind, always infectious, electively affecting that membrane, called ſcheiderian, which lines the inſide of the noſe, throat, and lungs, and, in its progreſſion, the ſkin—though I have ſeen the affection of the lungs ſo extremely ſlight, as not to call forth the leaſt attention, where there was a diarrhœa attended through the whole courſe of the diſeaſe.

DESCRIPTION. Its progreſs is divided into three ſtages—the *firſt* precedes, the *ſecond* attends, and *the laſt* ſucceeds the completion of the eruption.

At the commencement there are chilneſs and heat alternately ſucceeding each other—ſoon after, on the ſecond day, the fever increaſes, attended with conſiderable ſickneſs, great heat, thirſt, languor, and loſs of appetite--the tongue is white--there is a heavineſs of the head, and drowſineſs—ſneezing—brightneſs of the eyes, from whence flow a thin humour—the eye-lids ſwell, and, *moſt commonly*, there is a dry and very troubleſome cough—ſometimes vomiting and looſeneſs are aſſociates with theſe, the laſt of a green colour, when children are getting their teeth—and all theſe ſymptoms gradually increaſe till the ERUPTIVE, or SECOND STAGE begins, which occurs generally on the fourth day; about

which time ſmall red ſpots, like flea-bites, make their appearance in the face, which run into cluſters, forming larger ſpots, riſing above the ſkin, perceptible only to the touch, not the ſight; afterwards broad ſpots ſpread over the body downwards, not quite ſo prominent, though of a higher colour than thoſe of the face —when the eruption is finiſhed, the vomiting ceaſes, but the fever increaſes; and the cough, with the difficulty of breathing, become more violent—a ſweat and diarrhœa now and then ſupervene.

On the ſixth day, or thereabout, the THIRD STAGE commences, on which the ſpots on the face grow dry, and give it a rough appearance; and in three days more they totally diſappear from the whole body; for on the ninth day nothing is to be ſeen, except a dark coloured fine farina, or appearance like bran all over the ſurface of the ſkin—at this period, the fever and cough are ſometimes alleviated; ſometimes increaſed, and terminate in a dangerous peripneumony—and not unfrequently a looſeneſs ſucceeds the diſeaſe.

After this we are not to conclude the patient free from danger, unleſs, during its courſe, ſome conſiderable evacuation has taken place, either by ſweating, vomiting, urine, or looſeneſs; for without ſomething of this kind occurs, the cough will continue, the fever return with additional violence, and the ſtrength not be recovered except with great commotion in the ſyſtem, and, conſequently, extreme danger.

Though what we have deſcribed is the moſt frequent mode of the meazles appearance and progreſs to their termination, yet ſometimes they differ ſo much, that

authors

authors have denominated them ANOMALOUS, or IRREGULAR, as deviating from the common courſe, or as in the eruption putting on the appearance of the ſmall-pox—both which we ſhall deſcribe before we proceed to the cure.

The *anomalous* differ from the mild ſort, becauſe the eruption happens not on the fourth day, but ſometimes before, and ſometimes after—the ſymptoms preceding, as well as accompanying the eruption, are more ſevere—the eruption does not begin ſo much on the face as on the ſhoulders and trunk of the body—and becauſe it is attended by more dangerous conſequences.

Beſides the ſymptoms which are common in ſevere fevers, there are ſome which are more peculiar to eruptive ones of this ſort; for here the pulſe is ſmall and frequent—reſpiration is ſhort and quick—there is an oppreſſion of the hypochondres (28. 36.)—the urine pale—a great drowſineſs—twitching of the tendons—ſpaſms—delirium, with redneſs and watery appearance of the eyes—load on the eye-lids—and pricking pain in the ſkin—a ſoreneſs of the throat comes on, with a ſhrill hoarſeneſs, and violent cough, in which children appear almoſt ſuffocated, vomit up their food, and grow black in the face—when, after ſo ſevere a ſtruggle, the eruption appears, the fever in part depoſits its malignity, the diſeaſe is at its height; and the fever perſiſts in the ſame manner to the drying of the ſpots, which yet, according to SYDENHAM, did not ſeem to put on that branny appearance as before deſcribed.

The

The event of this fever is often dreadful and deadly; for, on the eruption receding, the fever and difficulty of breathing are augmented—a peripneumony or diarrhœa, occaſioned by the ſtriking in of meazley particles, comes on; which laſt is not without danger, as happens often in the milder ſort, becauſe *here* it is acrid, dyſenteric, and excruciating—ſometimes a cough, difficulty of breathing, and hectic fever ſucceed—at other times, a general dropſy, but oftener obſtinate inflammatory affections of the eyes.

The OTHER is ſaid to be common at PARIS, wherein the eruption is different from that of the common regular meazles; for they are more prominent, ſuppurate perceptibly like the ſmall-pox, and occaſion the face to ſwell conſiderably; but then they are attended with the cough, watery eye, and other affections, ariſing from defluxions, which chiefly diſtinguiſh them from the ſmall-pox.

CAUSES, whether inducing or proximate, are ſimilar to thoſe of the ſmall-pox, (419.) the peculiar particles only creative of the diſeaſe being altered.

CHARACTERISTIC SIGNS. An infectious inflammatory fever for the moſt part, with which are aſſociated, a defluxion of a thin watery humour from the eyes, tickling in the noſe, ſneezing, dry cough, more or leſs violent—on the fourth day, ſometimes ſooner, ſometimes later though rarely, ſmall ſpots running together, perceptible to the touch on the face, but broader on the body not perceptibly elevated above the ſkin, break forth, which in three days after are converted

verted into branny ſcales in part, and totally diſappear upon the ninth day.

CURE. In ſo mild a manner will the meazles ſometimes affect patients, that little is neceſſary to be done, except abſtinence from all animal food, or heating applications; and drinking freely of thin watery aceſcent liquids, ſuch as common fig drink, made agreeably acid with lemon-juice, apple water, or ſome ſuch like fluids.

But ſhould the febrile ſymptoms run high, we muſt proceed as directed in the ſmall-pox, (419.)---but great attention muſt be paid to the affection of the lungs---oily emulſions and linctures, (No. 81 to 83.) may therefore be preſcribed occaſionally, in conjunction with the other remedies, calculated to keep the febrile affections within proper limits.

Should oily medicines diſagree with the ſtomach, as is ſometimes the caſe, we muſt have recourſe to the claſs of demulcents, (290.) (No. 84.) uſing the pectoral decoction, or that of linſeed, as common drink.

After the eruption is completed, ſlight opiates are ſerviceable---but as nature generally performs her criſis either by ſweats, looſeneſs, or urine, we muſt obſerve what way ſhe directs her efforts, and proceed as we have before directed in cures of this kind, where they occur in fevers not eruptive.

As ſoon as the redneſs of the ſkin goes off, and the ſpots begin to die away, gentle purgatives muſt be adminiſtered, at proper intervals, and the patient return to his uſual mode of life gradually, (324.)---care alſo ſhould be taken, that patients expoſe not themſelves

too

too early to the cold air, for theſe are apt to bring on a very diſagreeable cough, aſthma, and conſumption, from affections of the lungs, or of ſome other parts.

Some perplexing ſymptoms, notwithſtanding all our attention, will now and then preſent themſelves, which aſk for our utmoſt exertions.

Should a *delirium* come on the fourth day, wherein the pulſe is ſmall, it is an unfavourable omen; ſtill, by the application of leeches to the temples, it may be mitigated or ſubdued.

It is alſo a bad ſign if *the fever ſhould increaſe and become violent*, accompanied with intenſe thirſt, about the termination of the diſeaſe---and ſhould there appear *great danger of ſuffocation*, as will ſometimes happen from too great an afflux of ſerous humours on the lungs on the ninth day, we muſt fly to bleeding, according to the ſtrength of the patient, and apply bliſters, to prevent an inflammation coming on from that cauſe---which, if it cannot be done, ſuffocation may be the immediate conſequence---or, eſcaping that, abſceſs will probably ſucceed, a hectic fever, and conſumption.

A *diarrhœa*, or *dyſentery*, is apt to come after vomitings of green materials; and continue, though the meazles have finiſhed their courſe---theſe complaints yield only to bleeding.

The meazles which put on the appearance of the ſmall-pox, require the ſame mode of treatment as the mild ſort.

But in caſes of the anomalous ſpecies, we muſt be directed by the nature of the fever, and proceed in our

modes

modes of cure, as pointed out in our treatment of the different kinds of the ſmall-pox.

A moderate looſeneſs, with a ſoftneſs and gentle moiſture of the ſkin, alleviate all the febrile ſymptoms --- but the ſlower the eruption, ſo much greater will be the danger---of which alſo we may have ſtrong ſuſpicion if they make their appearance on the ſecond, or the fifth and ſixth day from the attack---if they ſhould retrocede, and be aſſociated with delirium, or become livid, the worſt is to be dreaded---too high a degree of redneſs or paleneſs of the puſtules, great proſtration of ſtrength, vomiting, great reſtleſſneſs, difficulty of ſwallowing; or other ſpots, purple-coloured, like flea-bites, are alſo dangerous appearances---the contrary of all which will flatter us with the moſt pleaſing expectations.

Few people have thought the meazles to be a diſeaſe of ſufficient conſequence, to avail themſelves of thoſe aſſiſtances which, as in the ſmall-pox, might be derived from inoculation in this complaint. As for my own part, practically I cannot ſay any thing on the ſubject; but if we may believe the authority of ſome who have made the experiment, or be allowed to depend on reaſoning from analogy, our labours might be happily rewarded---for it is aſſerted, and appears probable, that from inoculation from infected blood, on the ſixth day a ſlight fever manifeſts itſelf moſt commonly, though it is very moderate, unattended with loſs of ſleep and inflammatory ſymptoms; and it is neither ſucceeded by a hectic fever, cough, nor inflamed eyes; ſo that we find we ſhould be freed from a train of

the moſt dangerous ſymptoms, and conſequently relieved, in many caſes, from the moſt diſtreſſing apprehenſions.

§ 3. WATER-POX.

This obviouſly takes its name from the fluid with which the puſtules are filled.

DESCRIPTION. This is a diſeaſe which attacks children about two or three years old, without any remarkable febrile ſymptom or indiſpoſition; it chiefly appears on the face, in ſmall red puſtules full of a clear or whitiſh watery fluid, about the ſize of a lentile; ſome of which dry off in two days, whilſt others increaſe; and all fall off in a dry ſtate within the ſpace of four, generally leaving no pits in the ſkin, as they are commonly attended with no inconvenience.

There is another variety which frequently affects infants a week old, and puſh forth ſimilar watery puſtules, about the navel, arm-pits, and fingers, which grow dry within three or four days, and fall off in a ſcab.

The cure left totally to nature is always ſufficient; and nothing more neceſſary, than, if it is cold weather, keeping in bed, living upon gruels, weak broths, and warm liquids.

§ 4. CHICKEN, OR SWINE-POX.

Having had in the courſe of practice ſo little opportunity of attending the complaint throughout, and when called, there being ſo little to be done, I confeſs it ſcarce ever awakened my obſervation, as nature, after the ſtomach and bowels were cleared, if ſuch attempts

appeared

appeared neceſſary, always performed the cure. I am happy to have it in my power to ſupply my readers with an account drawn by the pen of ſo accurate an obſerver as Dr. HEBERDEN, who ſays, in enumerating the

SYMPTOMS, that the pocks in many break out without any previous ſigns or illneſs; in others they are preceded by a ſlight degree of chillneſs, laſſitude, cough, broken ſleep, wandering pains, loſs of appetite, and feveriſhneſs for three days---the puſtules in moſt of them are the common ſize of ſmall-pox; but ſome are leſs---they are never confluent or numerous.

On the firſt day of the eruption they are reddiſh---on the ſecond there is at the top of moſt of the puſtules a very ſmall bladder, about the ſize of a millet-ſeed; this is ſometimes full of a watery and colourleſs liquor, ſometimes it is yellowiſh, contained between the cuticle and ſkin---on the ſecond, or at the fartheſt, on the third day from the beginning of the eruption, as many of theſe pocks as are not ruptured ſeem arrived at their full maturity, and thoſe which are fulleſt of that yellow liquor very much reſemble what the genuine ſmall-pox are on the fifth day.

A thin ſcab is formed at the top of the puſtule from the cuticle being burſt, on the firſt or ſecond day, which contains this thin fluid, by accident, or, perhaps, from rubbing to allay the itching; the ſwelling of the other parts abates without its being ever turned into pus---thoſe which eſcape being burſt, have the little liquor turn yellow and thick, and dries into a ſcab---on the fifth

fifth day of the eruption they are almoſt all dried and covered with a cruſt.

The patients ſuffer little, except ſome languor of ſpirits, ſtrength, and appetite.

This diſeaſe wants no remedies,

It is diſtinguiſhable from the ſmall-pox by the appearance on the ſecond or third day, from the eruption full of ſerum upon the top of the pock.

From the cruſt alſo, which covers the pock upon the fifth day, at which time the ſmall-pox is not at the height of its ſuppuration.

But of this diſorder there appears a more malignant ſort.

For three or four days all the ſymptoms which precede the eruption run much higher—on the fourth or fifth day the eruption appears, with very little abatement of the fever—the pains likewiſe of the limbs and back continue, to which are joined pains of the gums —the pocks are redder than the common chicken-pox, ſpread wider, and hardly riſe ſo high, at leaſt not in proportion to their ſize---inſtead of one little head, or veciſle of a ſerous matter, there have been from four to twelve---they go off juſt like the chicken-pox, and are diſtinguiſhable from the ſmall-pox by the ſame marks.

Beſides, the continuance of the pains and fever after the eruption, and the degree of both theſe, though there be not above twenty-pocks, are not obſervable in the ſmall-pox.

From the ſimilarity of the chicken, or ſwine, and ſmall-pox, we may be able to account for the tales we have

have had of people being affected with the ſmall-pox twice, or having them after being inoculated, and ſucceeding—for ſome may have been inoculated from the chicken, inſtead of the ſmall-pox—and this is one of the ſtrongeſt reaſons that has induced me to inſert this account, that the error may be avoided---as very little is neceſſary in this caſe to be done by medicine more than what has been before recited—taking care, that if the febrile ſymptoms run high, to treat it in the ſame manner as the ſmall-pox under ſimilar circumſtances.

It is alſo worthy of obſervation, that thoſe who have had the ſmall-pox may have the chicken-pox; but thoſe who have had the chicken-pox cannot be infected again by it; though, to ſuch as never had the diſtemper, it is as infectious as the ſmall-pox.

§ 5. Scarlet Fever.

This takes its name from the ſcarlet coloured efflorescence upon the ſkin.

This fever is inflammatory, and attended with different kinds of eruptions; whence it has been divided into two ſpecies—one called SIMPLE SCARLET FEVER —the other, SCARLET NETTLE RASH FEVER, from its eruptions being ſimilar in appearance to thoſe marks left by the ſtinging of nettles.

DESCRIPTION. At the commencement the ſymptoms attend which we find in continued fevers, among which there is no great degree of ſickneſs; but on the fourth day the face ſwells, the eruption manifeſts itſelf externally, which are red, more copious,

broader, and of a much more florid colour, but not at the ſame time ſo uniform as thoſe which attend the meazles; but they ariſe without any cough or watery eye, which diſtinguiſhes them from the meazles; they appear and recede two or three times during the diſeaſe; beſides, the redneſs ſhews itſelf to be uniform, as if the ſkin was ſuffuſed with red wine, not breaking in cluſters of puſtules upon the breaſt as the meazles do —in three or four days it entirely ceaſes—the ſcarf-ſkin ſoon after peels off, and there continues on the ſurface of the body fine bran like ſcales, which are ſucceſſively ſupplied for two or three times.

Sometimes eruptions break out on the face and reſt of the body like the ſtinging of nettles, with much itching, which are elevated above the ſkin, ſoon increaſe, of a pale roſe colour; ſometimes with protuberances almoſt eryſipelatous, and roughneſs like tetters—ſometimes, on the fever remitting, they diſappear; but about the evening ſhew themſelves, with fever, and a troubleſome hot itching—and, in three or four days, like the former, entirely ceaſe, when extremely ſmall ſcales ſeparate from the ſkin.

CAUSES. The ſame may be advanced here as in the meazles. (442.)

CHARACTERISTIC SIGNS. This is an infectious inflammatory or remittent fever, of ſhort duration, with a ſwelling of the face on the fourth day, attended with a florid redneſs all over the ſkin, with broad ſpots, running at laſt together, not elevated above the ſkin; or with ſpots like the ſtinging of nettles, which in three, four, or five days diſappear, occaſioning the

the ſcarf-ſkin to peel off, and covering the ſurface of the body with fine branny ſcales.

CURE. This is of the moſt ſimple nature—abſtinence from animal food, keeping out of the cold air, free uſe of watery liquids, thin gruels, and moderate warmth whilſt in bed; but ſhould the ſymptoms run very high, and the pulſe be very quick, full, and ſtrong, bleeding may be neceſſary, once, perhaps, and the uſe of ſaline mixture, (No. 1.) or ſmall doſes of antimonials, (278.) or nitrous powders, (No. 2.) keeping the body gently open, by the uſe of the mildeſt aperients, if coſtive, (264, 265.) (No. 3. 22 to 24.) and, after the whole is over, and the ſcarf-ſkin begins to peel off, two or three doſes of gentle phyſic ſhould be given, (265, 266.) (No. 19 to 22.)

But ſometimes convulſions, or great drowſineſs may come on in the beginning, particularly with infants, a large bliſter may be applied between the ſhoulders, and a quieting draught, ſimilar to No. 4. given every night, agreeable to the age and conſtitution of the patient---uſing, for common drink, milk and water, balm tea, in which may be diſſolved ſome gum arabic, and ſmall portions of nitre.

Doubts have ariſen about the exiſtence of this fever, Dr. Cullen having never ſeen it in its ſimple ſtate—however, it certainly does exiſt, and as deſcribed by Sydenham, of which repeated experience has convinced me; nay, indeed, I have known it ſeize ſeveral children in the ſame family, and moſt generally at the end of ſummer.

There is another ſpecies arranged here by ſome authors, ſtiled the MALIGNANT SCARLET FEVER—but of that we ſhall take the opportunity of ſpeaking under the head of Sore Throat, as that is one of its peculiar and diſtinguiſhing ſymptoms, and may probably be derived from that ſource.

§ 6. MILIARY FEVER.

This receives its name from being attended with eruptions in ſize and appearance like *millet ſeed*, which are ſometimes red, at others white—the firſt filled with a coloured ſerum; the laſt with a tranſparent fluid, called lymph, accompanied with ſcarce any redneſs at all.

Though the exiſtence of this fever has been doubted by many, ſtill, it is generally now allowed, that there is a fever of this peculiar kind, originating from ſpecific infectious particles getting into the blood, and producing its effects upon the machine—yet it may, and often does ariſe from the injudicious management of other fevers, by treating them with too heating a regimen—hence it is conſidered alſo ſymptomatic, and often joined with the ſmall-pox, meazles, and other fevers.

Like ſome other of the eruptive claſs, this is ſimple and complicated.

DESCRIPTION. At the commencement there is a chillneſs ſucceeded by no extraordinary heat—the fever is mild, attended by an uneaſy and copious ſweating—there is no general pain, but the head appears

pears ſlightly affected—no thirſt—the appetite continues—the pulſe depreſſed, and rather hard—and the urine appears healthful.

The patient ſoon after, on the ſecond day, begins to be fearful and apprehenſive, *conſtantly ſighing, from a ſenſe of weight and tightneſs at the pit of the ſtomach*—has uneaſy dreams—*dejection of ſpirits*—*the head confuſed*—his ſweats perpetually ſmell ſour—there are a variety of ſudden and involuntary motions, and *conſtant reſtleſſneſs*—the pulſe is *ſmaller*, and increaſed in *quickneſs*—and there is a certain ſenſation of tingling numbneſs in the fingers—and the urine pale and limpid.

On the third or fourth day, ſeldom later, red or white eruptions break out on the neck, breaſt, and back, ſeldom on the face, preceded by pricking pains, ſometimes itching—at this period chillneſs and heat ſucceed each other repeatedly, and the ſweating becomes profuſe—from thence, for about the ſpace of thirty hours, eruptions continue to come out, which are filled with a thin ſerous fluid, having round their baſis an inflammatory appearance. The ſymptoms now begin to be alleviated—the ſweating continues, though not ſo profuſely—the mind begins to be leſs oppreſſed—the urine puts on a higher colour—the pulſe becomes more ſoft and regular—and about the ſeventh day the puſtules for the moſt part grow dry, the ſcarf-ſkin peeling off in ſcales.

This is a pretty accurate deſcription of the mild ſpecies of this fever, in which we may expect the eruptions will very ſoon make their appearance, when there are uncommon dejection of ſpirits, watchings, confu-

ſion of the head, much oppreſſion on the breaſt, with a weak quick pulſe; for theſe are conſidered as the certain ſymptoms of their near approach.

CAUSES. Both the inducing and immediate are ſimilar to what we have delivered when ſpeaking of the meazles, (442.)

CHARACTERISTIC SIGNS. A mixed fever, attended with anxiety—dejection of ſpirits—frequent involuntary ſighing—ſtrong ſmelling ſweats—and pricking of the ſkin—ſmall diſtinct ſpots, for the moſt part of a red colour, breaking out moſt frequently on the third or fourth day on the neck, breaſt, and back, ſeldom on the face, whoſe tops reſemble, after one or two days, very minute puſtules, which continue only for a ſhort ſpace of time.

CURE. The indications of cure are the ſame as in other eruptive fevers.

Now this fever muſt in this place be conſidered of a mixed nature, (371.) verging rather more to the nervous than inflammatory claſs---however, if they attack thoſe of ſtrong, robuſt, full habits, and there ſhould be a great degree of vaſcular action, bleeding may, perhaps, be neceſſary, but that rarely---we ſhould rather proceed as we have directed when ſpeaking of the ſimple continued fever, to the uſe of ſaline mixtures, with ſmall doſes of antimonials, (278.) (No. 6 to 9.) from whence, if the ſtomach ſhould be foul, a vomiting will enſue; this will abate the ſickneſs, take off the oppreſſion, produce a gentle perſpiration, determine the morbid matter to the ſkin, moderate the febrile ſymptoms, and occaſion, though not a leſs copious, a more

more expeditious eruption---and before *that*, cooling purgatives are beneficial, though not afterwards, (264, 265.) (No. 3. 22 to 24.)

Bleeding, it muſt be obſerved, is only admiſſible in *the firſt ſtage* of this diſeaſe---afterwards it is ſo far from being of any uſe, that convulſions and death itſelf are often the fatal conſequences.

Cooling acids may alſo be allowed in the beginning; but when the eruption has appeared they are prejudicial—diluting, emollient, and aceſcent liquids may be uſed—and from fomenting the feet and legs with tepid fomentations, great advantages have been derived.

But ſhould the conſtitution be different from what we have ſpecified, that is, rather debilitated and languid, and the nervous ſyſtem appear to be in too inactive a ſtate, we muſt apply to ſuch things as are of more cordial nature, to ſupport and invigorate the conſtitution; but out of them we muſt ſelect thoſe of the milder ſpecies; for, by ſtimulating the habit too violently, we ſhould prevent the ſeparation and expulſion of the morbid matter, and be inſtrumental in occaſioning it to fall upon ſome of the nobler parts internally.

Hence, then, ſuch cordial volatile medicines as we have preſcribed in the nervous fever, or ſome things ſimilar, ſhould be adminiſtered—and wine and water, or white wine whey may be allowed to be drank occaſionally.

Bliſters ſhould alſo be applied; and as ſoon as one has ceaſed to diſcharge, another muſt be laid on, becauſe it is obſervable, that the evacuation produced by them, as well as keeping up the ſtimulus, affords great

relief; for, on the evacuation ceaſing, all things wear a more unfavourable aſpect, which are always altered for the better, on the reproduction of the diſcharge.

But ſometimes, inſtead of the convulſive ſymptoms being mitigated after the eruption, they increaſe, attended with ſuch a train of ſymptoms as are indicative of greater degree of danger.

For the febrile affections grow more violent, increaſing about mid-day and at night—the ſleep is diſturbed with dreadful dreams—the ſweating decreaſes—the ſkin is hot and inflamed—the head is affected with pain, producing the ſenſation of inward diſtenſion—the face appears fuller—the tongue is dry and white—the pulſe ſmall and quick—and the urine copious, thin, and watery.

On the third day of the eruption there appears a great augmentation of violence throughout—the heat is burning—the puſtules ſubſide—the ſweat ceaſes—the ſkin becomes rough—the tendons ſtart—the patients are extremely reſtleſs, froward, and loquacious—they grow delirious, and are convulſed—they become thirſty—the pulſe is hard and quick—and the urine copious, and like water.

The belly, which before was coſtive, is now the reverſe, evacuating fœtid bilious ſtools—ſhould any ſweat return, this violence on the puſtules breaking out again is mitigated---and on the ſucceeding day the eruptions become more copious and larger, the former beginning now to dry---notwithſtanding which, about the third day the ſecond crop creates new and ſimilar diſtreſs, though in a milder degree than the former---

a third

a third and fourth crop will ſucceed, until the laſt ſtage or declenſion, ſimilar to what occurs in the milder ſpecies.---Still in this ſtate of the diſeaſe there is a bilious fœtid looſeneſs, with rolling of wind in the bowels, which continues—the urine ſometimes feels hot, and appears like milk whey without any ſediment.

Patients afflicted with this fever ſeldom recover before the fifteenth or twenty-firſt day.

This fever has been by ſome conſidered of the inflammatory claſs; by others it has been called the acute malignant---but it appears to be truly of the mixed kind, and might properly be looked upon as a *malignant miliary mixed* fever.

Sometimes the progreſs of this fever is ſlower, and longer continued, the puſtules not ſtriking out with a proper redneſs, but ſinking down in the ſkin, or retroceding inwardly, liable to return at ſome other time, and occaſioning a ſlow recovery; and ſometimes death; but its progreſs is different in ſome degree.

This fever is apt to ſeize the delicate and relaxed, who have a thin and acrimonious ſtate of fluids.

In addition to the puſtular appearance above ſpecified, the tendons ſtart continually—a delirium and convulſions come on—the head-ach, though conſiderable, is not very acute—the tongue trembles—the velocity of the pulſe is not ſo great in the eruptive ſtage; but the freedom and quickneſs are irregular; ſometimes it almoſt intermits—the urine is various, ſometimes thin or higher coloured, but oftener turbid and ſmall in quantity---but a viſcid ſweat breaking out which is fœtid, having for its aſſociate ſome larger ve-

ſicular

ſicular eruptions, and puſtules of ſize more conſiderable, putting on an appearance almoſt ſimilar to the ſmall-pox, alleviate theſe ſymptoms.

After this ſtage, now and then the patients become extremely drowſy, and have continual twitchings of the tendons, and convulſive eructations, then become ſtupid, forgetful, and fall into a ſtate of lethargy; to which ſucceed convulſions, which are followed ſlowly by ſnoring and death.

This fever, ſhould the patient recover, is apt to return about the ſame time in the ſucceeding year, and often ſeizes women during their lying-in—whence there is a ſuppreſſion both of their milk and thoſe diſcharges after child-birth, called lochia.

The mildeſt ſort of the miliary fever generally terminates in ſeven, the malignant mixed in fourteen, and this in about twenty-one days.

There can be little doubt of the nature of this fever, if we pay attention to the ſymptoms, for they beſpeak it truly nervous—hence, for the cure, we muſt refer to what we have ſaid on the nervous fever, (338.) making, perhaps, a freer uſe of bliſters, and obſerving a quicker ſucceſſion, for the reaſons advanced. (455.)

Sometimes, added to the miliary eruptions, ſuch a train of ſymptoms will attend, as clearly to ſhew its diſpoſition to be of the putrid kind; little deviating from what we have recited when ſpeaking of putrid fever, (345, &c.) and conſequently will require ſimilar applications—but ſtill, though much cannot be expected from bliſters in ſymptoms ſimply putreſcent; yet ſuch is the alleviation they bring in miliary eruption,

tion, that to neglect them would be an error of no trifling conſequence—and, if to theſe we add the uſe of bark, mineral acids, and wine, little more can be expected to be done in this fever, as theſe are the principal materials from whence we can expect any conſiderable ſucceſs.

Should a looſeneſs come on under any of the circumſtances of this fever, we muſt proceed in the ſame manner as we have before directed, taking care not to be too buſy in putting a total ſtop to it by the uſe of aſtringents; for if that happens, we may expect a great increaſe of febrile affections, which is invariably the caſe; we ſhould rather attempt to ſolicit a flow of humours to the ſkin, by ſmall doſes of ipecacoanha, (278.) (No. 57.) and ſupport the ſtrength of the patient by wine, and other generous antiputreſcent cordials.

Thoſe ſigns which portend a favourable concluſion are,

If *convulſions* begin with, or precede the eruption, and, upon ceaſing, the pulſe becomes ſoft and full, the *puſtules filled with ſerum* grow large—if they are of the red kind, and manifeſt themſelves with a gentle perſpiration, free and eaſy reſpiration, and the pulſe as above ſpecified, the fever having remiſſions.

But if the *ſweat* ſhould be violent and premature, particularly if the pulſe at the ſame time ſhould be ſmall, they indicate miſchief.

A *tingling ſtupor* or *numbneſs* in many places, ſhews that the morbid matter is copious; but if it is ſlight, attended with watery urine, ſweats, and a ſmall pulſe,

it

it not only indicates the ſame, but ſhews the virus not eaſily determined to the ſkin; hence dangerous.

Should there be *great dejection of ſpirits, the patient become very fearful, loſe all hope, riſe up terrified,* theſe are bad omens—nor is it a promiſing appearance if the *ſkin does not ſwell* from the eruption, nor be affected from the application of bliſters or cupping-glaſſes.

If the *head-ach* goes off before the fourth day, in thoſe of full habits particularly, it is an unfavourable ſign; and *a ſmall pulſe, growing more ſo after the eruption,* with tenſion, and quickneſs increaſing, denotes convulſions, and diſſolution, or extreme danger.

If the *urine* is conſtantly watery, or changes to that from a reddiſh colour, this affords no good ſign; but it beſpeaks a long continuation of the diſeaſe if it is like milk-whey.

Drops of blood from the noſe at any time beſpeak great danger; and, when drawn, if it ſhould be of a ſcarlet colour continually without ſerum, it is a bad ſign.

If, at the concluſion of the diſeaſe, the *ſcarf-ſkin peels not off at all, or only ſparingly, the convulſive ſymptoms ſtill continuing,* we may expect a relapſe.

WITH REGARD TO THE ERUPTION, the *red* are more favourable than the *white*; and the ſooner they make their appearance, ſo much the worſe; for thoſe which appear upon the third or fourth day often prove mortal on the ſeventh or eighth; they are leſs dangerous if they break out on the ſixth; the later the ſafer; for the ſooner they appear, the diſeaſe is proportionably of longer continuance, and more apt to return.

After

After the eruption all *oppreſſive convulſive ſymptoms* are ominous, and thoſe which follow the ſubſiding deſtructive.

If the *puſtules are ſmall, and very numerous*, they beſpeak danger—nor is it a favourable ſort *which do not prick, but itch when they are puſhing out of the ſkin*—but if they *recede*, and afterwards the patient vomits, ſees badly, has a rattling noiſe in ſwallowing, hiccoughs, and ſtammers in talking, theſe import extreme danger.

By how much more copious and prominent are the puſtules, by ſo much ſooner will death make its approach, if they ſubſide—and thoſe which ſometimes ſubſide, and ſometimes appear, indicate a long continuance of the diſeaſe.

§ 7. Erysipelas, or Serous inflammatory Fever, commonly called Saint Anthony's Fire.

This is conſidered as an inflammation of the ſkin, and ſubjacent fat, attended with an inflammatory fever, originating from an acrimonious humour and inflamed ſtate of the thinner part of the blood, from which nature endeavours to free herſelf by expelling the morbid portion from the habit, and depoſiting it on ſome external part, chiefly the ſkin, in broad red ſpots, which creep from place to place—hence its name, from the Greek words *eruo*, to draw, and *pelas*, into the vicinity.

DESCRIPTION. It generally commences with chillneſs and ſhivering, which in a day or two are ſucceeded by a violent ſudden redneſs, and pain, attacking

ſome part or other, chiefly the face; and has for its aſſociates an acrid heat, roſy-coloured effloreſcences, with great tightneſs of the ſkin, ſlightly ſwelled, which is broad and diffuſed, not circumſcribed—the febrile affections increaſe, with heat, anxiety, thirſt, often alſo a white tongue and ſtrong breath.

But it is often attended with greater degrees of violence—*then* it begins with great ſhiverings, ſucceeded by a burning heat, acute head-ach, retching and vomiting, till the eryſipelas appears, which is ſometimes deferred to the ſecond or third day; when the febrile ſymptoms are alleviated, and the ſickneſs ceaſes, though, not unfrequently, they continue in a ſlighter degree to the height—ſometimes, when the diſeaſe runs high, the fever continues, the brain is oppreſſed, delirium comes on, and matters wear an unpromiſing aſpect.

Upon the tumid part veſicles ariſe, and run along the forehead hairy ſcalp, eye-lids, neck, forming a circle round them, which, if injudiciouſly treated, become gangrenous, and creates delirium—ſometimes the humour filling the puſtules, and iſſuing from thence, inſtead of being thin and ſerous, is thick and gluey, and forms a thick ſcurf or cruſt, continuing fixed before they fall off, for many days.

The diſeaſe frequently terminates in ſeven days; but ſometimes it will proceed in a ſimilar manner for eight, ten, and twelve days, and at laſt go off by a copious ſweat, of which reſtleſſneſs, with concomitant ſhivering, and ſome anxiety, though not much, for a ſmall ſpace of time, will be ſometimes the forerunners; and

from

from thence may the critical effort be prognoſticated. During the progreſs of this complaint, the whole ſkin and inſide of the mouth is very dry.

CAUSES. The *remote* or *inducing* are ſaid to be, violent mental affection, particularly anger and fear—a ſudden cooling of the body, heated before by the ſtrong power of the ſun—drinking of, or bathing in too cold water—a ſuppreſſion of the natural or artificial evacuations—moiſt and rainy ſeaſons—and, in fine, whatever occaſions the obſtruction of perſpiration.

The *proximate* or *immediate*, acrimonious and heating particles derived from humours that are contaminated and retained, which ought to have been thrown out of the habit.

CHARACTERISTIC SIGNS. An inflammatory fever, for the moſt part, of a few days continuance, with a ſuperficial, ſolitary, diffuſive ſwelling, of a red roſe colour, going off upon preſſure, and returning; of an uniform ſmoothneſs, unleſs made rough by eruptions; and is attended with an acrid burning, or itching heat.

CURE. As this diſeaſe, though neither infectious nor contagious, evidently ariſes from ſome acrid humours ejected out of the maſs of fluids, and collected in the cuticular veſſels, through which it ought to eſcape out of the habit, we muſt be very cautious not to lower the fever too much by exceſſive evacuations; nor hinder the exit, or cauſe the retroceſſion when diſcharged upon the ſkin by the injudicious adminiſtration of cold or aſtringent applications; for the indications of cure are, ſo to regulate the moving powers, as to enable

enable them to throw the offenſive matter out of the conſtitution, and prevent any retroceſſion on the internal and vital parts.

Hence, therefore, muſt we proceed, as in other caſes, conſiſtently with the ſtrength of the habit. If it attacks thoſe of ſtrong full conſtitutions, we bleed in proportion to the ſtrength, and give the cooling cathartics, ſuch as purge off the ſerous humours in the moſt certain and eaſieſt mode, as vitriolated natron, acetated tartar, Polychreſt ſalt, Epſom ſalt, manna, tamarinds, cryſtals of tartar, jalap, &c. (265. 267.) (No. 1. 22 to 24.) and, on the intermediate days, we ſhould give at intervals antimonials joined with nitre, acetated tartar, or the ſaline mixture; to which gentle aperients may be added, if neceſſary.

Emetics in this caſe have been found efficacious—muſtard poultices applied to the feet, and bathing the legs and feet in warm water are very beneficial, where the head and face are affected—and, under this circumſtance, bleeding and purging may be repeated, till an alleviation of the ſymptoms are produced.

In all our endeavours we ſhould attempt to promote gentle evacuation by the ſkin with cooling diaphoretics.

There have been different opinions with reſpect to local applications on the part affected; ſome adviſe mild and ſoftening applications to the part affected, as freſh cream, the ointment of elder leaves, tepid watery fomentations, or the uſe of the water of acetated litharge---however, the fine powder of fenugreek, or wheat flour, ſprinkled upon the part, and lying in bed

bed---or, if a fluid begins to ooze out of the veſicles, chalk or ſtarch may be ſprinkled on a ſoft cloth, and thus applied; for all repellents, whether of an aqueous or oily nature, are hurtful.

Should the ſwelling be ſuddenly depreſſed, from a retroceſſion of the offenſive matter, attended with internal oppreſſion and anxiety, and at the ſame time the pulſe becomes weak and ſinks, we muſt immediately apply bliſters, and have recourſe to vinous and other cordials; wine may be exhibited freely, volatile and other ſtimulants, which have more permanent action, ſuch as the nature of the circumſtances may require.

Sometimes this diſeaſe attacks the trunk, cheſt, ſhoulder-blades, or ſides, and frequently makes its appearance lower, encircling the middle of the body, like a belt---hence called by the Greeks ZOSTER and ZONA, a belt; and by the Engliſh SHINGLES, from the Latin word *cingulum*, a girdle.

In this complaint little yellowiſh pimples, but more frequently of a livid hue, ariſe, which are wont to corrode, like a tetter, which ſpecies they reſemble.

The fever which is the aſſociate of this eruption is only ſlight; but, ſhould the pimples be puſhed back, ſymptoms of greater conſequence preſent themſelves.

There have been inſtances where the eryſipelas has begun with ſhivering, heat, delirium, violent pain of the back, head, and other parts of the body, where there was no inflammation; but upon the third or fourth day, the hot burning humour was depoſited in the glands under the arms, or in the groin, and there formed abſceſſes; or deſcended into the feet, and

brought on mortification; and from a retroceſſion of the morbid matter, life was in the moſt extreme danger.

For if this matter cannot be made to re-appear, the peccant humour is depoſited upon the brain or breaſt, and death is ſhortly the conſequence—if the depoſition happens upon the brain, delirium immediately ſucceeds, the viſage is fluſhed, the eyes ſparkle very quick, then follows madneſs, terminating fatally in lethargy; but ſhould it be upon the lungs, the heat and anxiety is intolerable, of which no words are adequate to convey a perfect idea.

Notwithſtanding theſe appearances, our modes of cure vary not from that which we have before deſcribed.

Though, in general, the eryſipelas very ſeldom comes to ſuppuration, ſtill, when that is the caſe, it does not maturate kindly, and frequently forms diſagreeable and ill-conditioned ulcers.

Sometimes a mortification will threaten, then muſt we apply ſuch things as are calculated to ſtop its progreſs, as decoction of bark, lime-water mixed with camphor and ſpirits of wine, or camphorated ſpirits of wine, with tincture of myrrh.

In the ſlighter kinds of eryſipelas there is no great danger; but if a violent inflammation, attended with ſtupor, drowſineſs, or delirium, ſhould ſeize patients with an acrimonious ſtate of fluids, much are the conſequences to be dreaded.

Should the inflammation recede or be repelled, it brings on delirium, internal inflammations, aſthma, convul-

convulſions and mortification; or ſhould the tumid part grow livid, we may conclude the latter of theſe affections at hand. With reſpect to the puſtules, the thicker and whiter the matter, the leſs will be the degree of danger; but ſhould it be thin and pale, ſo much more in proportion will it be increaſed.

The PLAGUE, and that fever called PEMPHIGUS, from the Greek word *pemphix*, bulla, a bubble or veſicle, or BULLOUS OR VESICULARY FEVER, ſhould be next treated on; but as I have had no experience in the former, I ſhall proceed to ſpeak on the latter only as far as it has fallen under my obſervation, as the diſeaſe itſelf ſeems not to be perfectly ſettled by authors.

§ 8. PEMPHIGUS, BULLOUS OR VESICULARY FEVER.

This takes its name from the bliſters with which it is accompanied, breaking out on the ſurface of the body, of the ſize of hazle nuts.

In three inſtances they were attended with a fever of the continued kind, purely inflammatory; and in one it appeared to be contagious, attacking the wife of one man labouring under the diſeaſe a few days after the eruption, who would not ſleep from him during his illneſs. It was in theſe caſes treated as an inflammatory fever, free uſe being made of the ſaline diuretics, particularly the acetated kali.

The other two had ſcarce any febrile ſymptoms, but copious eruptions filled with yellow ſerum, which went off, and returned at different periods—diuretics in theſe two caſes were uſed in the beginning, and, at the

concluſion, bark was joined along with them, and cordials, there appearing obvious remiſſions of the febrile affections, which were ſlight, and ſeemed to point out the nervous ſyſtem to be the ſeat of the diſeaſe, from the languor and lowneſs with which the complaint was attended, and the pulſe at the ſame time being weak, ſmall, irregular, and quick.

SECTION XIII.

INFLAMMATORY DISEASES.

CHAP. I.

ON INFLAMMATION.

IN a former ſection we have ſpoken of inflammatory fever, (324.) which we have ſaid depended upon a peculiar ſtate of the vaſcular ſyſtem and blood, the moving powers, or part of them, put into too ſtrong motion, and ſupported in the violence of their action by the peculiarity of that ſtate: here the affections were general, produced not by, or dependent upon, any other diſeaſe.

But in this place we are to treat of local affections, having a fever for their aſſociate; hence it is to be conſidered, not as a primary, but as a ſecondary diſeaſe, produced by, or dependent on, ſome other; conſequently only a ſign that ſome other malady reigns in the

the habit—the firſt of theſe fevers is called IDIOPATHIC, the ſecond SYMPTOMATIC.

Now, in inflammation there are ſome particulars obſervable, which, on examination, will lead us to the cauſe, and enable us to lay down certain rules for the cure.

In a part under a ſtate of inflammation there are *more than natural heat*, *redneſs*, *tenſion*, *pain*, and *ſwelling*.

The FIRST is produced by the blood circulating to the part with more than uſual force, and being there collected in too great quantity; and wherever that is the caſe, there is a proportionate increaſe of warmth—the SECOND is owing to the blood being puſhed into thoſe veſſels, which, in an healthful ſtate, are only permitted to carry the ſerous or thinner fluids ſtrained from the ſanguinary maſs—the THIRD ariſes from a too great quantity of fluids crowding into the containing veſſels, by which they are diſtended, and their fibres diſtracted, which produces the FOURTH, or PAIN—and the FIFTH deduces its origin from the diſtenſion, and the fluids being too freely puſhed into the cellular membrane; or exuding through the coats of the veſſel, by their natural pores being made too permeable, from the ſuperabundant quantity of liquids they contain.

Now all theſe effects may be produced by *ſtimulus* of ſome nature applied to the parts affected, increaſing the action of the veſſels, which ſolicits the fluids to circulate to theſe parts too rapidly, and produces *diſtenſion*.

Hence it appears obvious, that theſe two cauſes are adequate to create theſe effects---one of which acting

will occaſion only a ſlight degree of inflammation, of no long continuance---but if they both are conjoined, then ariſes an inflammatory diſeaſe of greater violence and duration; inaſmuch as, from theſe two cauſes co-operating, the effects produced will be more vehement.

But in the parts which are moſt ſolid, or in which the veſſels continue their courſe in a ſtraight direction, ſhould any inflammation ariſe, *there* will conſequently be greater degree of pain, than if it happens in the ſofter viſcera, or glandular parts; becauſe there is always a higher degree of tenſion in the veſſels—hence in firm membranous parts, the ſkin, ligaments, tendons, cartilages, and bones, (7, 8, 9. 12.) inflammations are found more acutely painful, whilſt in the ſofter parts before-mentioned, the pain is ſometimes ſlight, and always inferior to that of the other.

But external accidents will, by producing the two cauſes aſſigned, (469.) create local inflammatory ſymptoms, whilſt the vaſcular ſyſtem in general ſhall perceive no diſturbance, which will not at all be indicated by the pulſe, or other febrile affections; ſo that if a fever ſhould ariſe, as it generally does in all conſiderable inflammations, it is to be conſidered as owing its origin to this cauſe, and is a conſequence, therefore only eſteemed a ſymptom; for exceſſive heat, thirſt, and reſtleſſneſs, are concomitants of vaſcular affection, and generally attend inflammatory diſeaſes, independent of any fever, except what they themſelves create; whilſt weakneſs and loſs of appetite, eſſential ſymptoms attendant on primary or idiopathic (469.)

fevers

fevers of any continuance, are wanting, and ſeem to belong to affections of the nervous ſyſtem.

But ſome inflammations owe their origin to fever, and may be occaſioned by peculiar cauſes; either from the elective power of morbid matter thrown into the habit, that is, a predilection for fixing on ſome peculiar part or parts in preference to others, as in the ſmall-pox, meazles, gout, rheumatiſm, &c. or from local conſtitutional imperfection—hence we find, different parts may become the ſeat of inflammation from general cauſes alſo; for if the reſiſtance of any part is ſupernaturally increaſed, and a ſtimulus ſhould be applied to them from acrid humours circulating in the maſs of fluids, and fixing there, an inflammation will be the unavoidable conſequence—and theſe very often terminate fatally, ſhould it in fevers fix in ſome of the nobler parts; and to theſe is often to be attributed in many fevers the death of the patient.

If we reflect on the cauſe of inflammation, we ſhall find, that every part of the human machine, which is plentifully ſupplied with blood veſſels interwoven in their texture, is ſubject to this affection---and *moſtly ſo* are thoſe parts which are liable to be expoſed to external injuries; or to ſtimulating materials, which circulate, and are buoyed up in the atmoſphere; though ſome of the very thin membranes, the ſcarf-ſkin, hair, and nails, may be conſidered as exceptions.

Hence, according to the conſequence of the part affected, will be the diſturbance of the conſtitution, and the degree of danger; and theſe will manifeſt themſelves according as the uſe of thoſe parts is moſt

immediately connected with thoſe actions of the conſtitution on which life is immediately dependent, by which the machine is nouriſhed, and its parts kept in proper order, and from whence it has its power of motion, diſtinguiſhed by the terms *vital*, *natural*, and *animal*—upon all which, acting in uniſon, is conſtituted the welfare of that machine.

With reſpect to the termination of inflammation, there are five modes, RESOLUTION, EXUDATION, SUPPURATION, MORTIFICATION, and SCIRRHUS.

Inflammation is conſidered to terminate in RESOLUTION when, in the firſt inſtance, the flow of blood is diverted from the part affected, the violence of vaſcular action allayed, and ſtrength given to the coats of the veſſels, ſo that they may be properly ſupported, and the diſſipation of the load of fluids which have been collected be procured; or they may be reſorbed into the habit—by EXUDATION, which occurs only in ſuperficial inflammations on the ſkin, and membranes lining internal cavities or paſſages, or covering the different viſcera, when diſtenſion of the arteries, and an enlargement of the pores of their ſides takes place, by the rapidity of motion producing more than uſual force on the veſſels in an inflammatory ſtate, occaſioning great increaſe of heat, and expanſion of the contained fluids.

In this manner frequently ends eryſipelas, by puſhing forth little puſtules or bliſters, and freeing the veſſels which are inflamed—ſo alſo in burns and wounds matter exudes, which is termed digeſtion; and as this comes on and continues, ſo are the parts affected alleviated,

viated, and totally cured. Nature alſo makes uſe of this expedient in catarrhal and other ſlightly inflammatory complaints of the lungs, as well as in the gonorrhœa virulenta, or clap; for all theſe are ſuperficial inflammations—by ABSCESS, or SUPPURATION, when neither of theſe proceſſes takes place, but the violence of motion continues or increaſes, and the weakneſs of the veſſels ſtill remains; then the fluids which have been collected in the cellular membrane are either too copious, or become ſo thick and viſcid, that they cannot be abſorbed and received back into the circulating fluids, nor puſhed out, and thus evacuated through the pores of the ſkin---amongſt theſe another proceſs takes place, termed FERMENTATION, wherein the veſſels, cellular membrane, and muſcular fibres are melted down, and a white thick matter is formed, called pus; but this happens chiefly in more deep ſeated inflammations in ſome viſcous, fleſhy, or glandular parts---by MORTIFICATION, when the force of circulation is ſo violent againſt the ſides of the inflamed veſſels, that the coats are ruptured; or when the arterial coats are ſo very weak, that the blood burſting into the cavities of the cellular membrane there ſtagnates, and quickly corrupts, forming what is called in medical language GANGRENE, or SPHACELUS; the firſt conſidered by ſome as mortification in its incipient ſtate; the laſt when it is perfectly formed; but others, when the ſkin and cellular membranes are the parts affected, give it the former name; when the muſcular, the latter; when the bones, it is called CARIES; ſo, in fact, they are all truly mortifications, though only of different parts.

When

When mortification takes place there is a ceſſation in the part of all pain, from the deſtruction of the living ſolids; hence the protruſion of blood, which becomes of a darker colour than before, or has a livid appearance; hence its ſtagnation and corruption, and deprivation of its natural colour---after this, a ſpontaneous ſeparation of the parts which compoſe it takes place, the thinner part is driven forwards towards the ſurface, and elevates the cuticle into bliſters.

From what has been ſaid, we may form a judgement why mortifications are moſt likely to occur in thoſe whoſe fluids are in an acrid ſtate, old people, and thoſe of dropſical habit; becauſe the ſolids are ſoon broken down, and many ſlight accidents are ſufficient to produce theſe dangerous, and often fatal effects, which we at firſt obſerve with an unſuſpicious eye, when they are attacked by inflammations of ſome force; for, indeed, in conſtitutions not labouring under theſe defects, they rarely happen.

The laſt termination we ſhall mention is, SCIRRHUS, here conſidered as a hard indolent tumour only, and chiefly preſents itſelf in the ſpongy viſcera, as the lungs, meſentery, womb, and particularly the glands in various parts of the machine.

And this generally ariſes from the circulation in the glands, generally being too languid---hence are obſtructions formed from the fluids inſpiſſating within the ſmall capillary, or hair like tubes, and only producing vaſcular diſtenſion ſo gradually, that there is no great exceſs of pain, nor any violent increaſe of heat, ſo that proper power is wanting to create that proceſs

which

which induces ſuppuration, and alſo force ſufficient to break down the veſſels, and produce mortification, which in theſe parts are ſaid ſeldom to take place, except from acrimony of the ſharpeſt nature pouring down on the veſſels of any particular gland, and being there depoſited.

Inflammation then may be conſidered only as one cauſe of ſcirrhus, which induce theſe tumours by imperceptible degrees, and very ſlow beginnings, which are attributed to ſome peculiar indeſcribable defect of the humours, terminating frequently in cancerous affections.

They are, beſides, productive of great miſchief from the compreſſion of the neighbouring parts, as palſy, impeded deglutition, barrenneſs, and many other complaints.

From what has been ſaid on this ſubject of inflammation, we ſhall be readily and forcibly ſtruck with the moſt eligible modes of termination.

The firſt is by *reſolution*, the ſecond by *exudation*, if the matter exuded can have a free exit out of the habit; but in thoſe inflammatory affections which make the membrane that lines the cavity of the breaſt, and abdomen, or belly; or which cover the different viſcera contained in them, the objects of their attack; and if the matter which from that cauſe exudes from their ſurface ſhould remain there, a hectic fever will be the conſequence, though the original pain ceaſes, and a freſh concourſe of ſymptoms will then ſucceed. But ſuppoſe neither of theſe te minations can be brought about, we then wiſh for ABSCESS, becauſe only the inert ſolids ſuffer chiefly,

chiefly, and ſeldom have any permanent bad effects, if they can only be permitted to clear themſelves; for then the parts heal up; nor have the nerves or blood-veſſels ſuffered any material deſtruction, though the laſt may have been diſtended, and ſuffered greatly from ſuch diſtenſion; yet, once freed from the impelling cauſe, ſoon recover their tone, ſufficiently to perform properly their conſtitutional action; and as for the inert ſolids, they are again ſoon ſupplied, by the digeſtive powers of the machine forming freſh materials from nutriment, in order to renew the ſubſtance loſt, by the application of homogeneous particles poured into the interſtices of the cellular membrane.

In all our attempts to cure inflammatory complaints, our firſt aim is *reſolution*, whether the part affected be external or internal; the former of which is obvious to ocular demonſtration; the latter, by heat and pain affecting ſome inward part, accompanied with general febrile affections; of which we ſhall ſpeak more particularly when we come to treat on parts labouring under this complaint; at preſent we ſhall ſhew how we attempt to bring about reſolution, when any conſiderable inflammation calls for our aſſiſtance.

If it occurs in habits which are plethoric and ſtrong, the pulſe full and quick, and much increaſe of heat, we purſue the ſame courſe as was delivered when treating on inflammatory fever, § 2. Section VIII. attempting to allay the intenſeneſs of motion in the vaſcular ſyſtem, and abating the exceſs of heat, which is the natural concomitant.

But

But here ſometimes the complaint yields not to general bleeding, we then ſhould have recourſe to local, by the application of leeches or cupping-glaſſes near the part affected, which will very often ſucceed; and as there is too great a flow of fluids to the part, we endeavour to leſſen that by ſmart cooling purges, (No. 3. 22 to 24.) giving freely in the intermediate times between the purges, nitrous powder, (No. 2.) mixed with ſmall doſes of antimonials, (278.) gentle aperients, (264, 265.) and other cooling ſaline diuretics, (272.) applying to the parts themſelves fomentations, (No. 85.) with which let the part affected be fomented three or four times a day, and continued at each time for half an hour, or longer, taking care not to apply it too hot, but only moderately warm.

Afterwards the inflamed part ſhould be covered with a white bread poultice, in which a ſufficient quantity of ointment of marſh-mallows has been uſed---ſome adviſe a poultice of bread boiled in litharge water, called vegeto-mineral water; others of wine-lees thickened with bran; and ſeveral prefer that of bean-meal and ſimple oxymel, ſoftened with oil of roſes---and ſhould the tumor and inflammation be by theſe means diſſipated, the poultices ſhould be changed for ſtupes moiſtened with the camphorated lotion, (No. 86.) and occaſionally applied to the parts.

By theſe means commonly reſolution will take place, the humours collected in the part being diſſipated, and the remainder abſorbed back into the habit, by the lymphatic ſyſtem being freed ſufficiently, and ſtimulated to a reproduction of its action in the part affected.

But,

But, notwithſtanding our efforts, if the common ſymptoms ſhould gradually increaſe, ſuch as great heat, throbbing in the part affected, ſuppuration will take place, and an abſceſs be formed—here, then, our mode of cure muſt be altered, and we muſt aim at ſoliciting the matter externally, and freeing the habit in a proper time, by the application of thoſe things which promote ſuppuration, thin the external ſkin, and determine the contained matter towards the ſurface.

Hence poultices made of mallow leaves, boiled in milk with linſeed, or linſeed itſelf—boiled lily roots, or onions---the maturating cataplaſm—or the gum plaiſter, will anſwer the purpoſe; for theſe, by clogging the pores of the ſkin, prevent the diſſipation of the humours, increaſe the heat of the contained fluids, promote the proceſs of fermentation, and render the humours more active in diſſolving, or melting down the ſolid parts, as well as ſoften the integuments, and, by their ſtimulus, ſolicit the fluids to puſh outwards.

From theſe applications, then, the abſceſs will ſoon be in a proper ſtate for opening; which muſt be performed in the moſt dependent part, if the ſwelling is equally ſoft throughout, and the ſkin of a ſimilar thinneſs; if not, where the part is ſofteſt, and the fluctuation of the matter moſt perceptible; and the aperture ſhould be made of ſufficient width, in proportion to the ſize of the tumor, that a free egreſs may be allowed for the matter.

After this, the healing of the wound in good conſtitutions is ſeldom attended with any difficulty---dry lint placed gently in the part, and that covered with

the ointment of yellow reſin, ſpread thin upon lint or tow, are the general dreſſings at firſt; and from theſe freſh granulations will appear; and in time fill up the cavity occaſioned by the loſs of ſubſtance; but ſhould the ſore appear foul, covered at the bottom with a white or brown appearance, inſtead of red granulated fleſh, we muſt apply ſome of thoſe things conſidered detergent, or cleanſing; as the ointment of gum elemi, of yellow reſin, mixed with a proper proportion of red precipitate, or green baſilicon; theſe will cleanſe the ulcer; and then dry lint as before, and proper bandages, will in common perform a perfect cure.

But ſometimes, inſtead of a thick well-coloured laudable matter, there will be a thin ichorous diſcharge, occaſioned by an acrimonious ſtate of humours, while, at the ſame time, there will be febrile hectic ſymptoms.

Under theſe circumſtances, in order to produce a laudable ſuppuration, and take off the hectic affections, in relaxed habits, joined with an acrid ſtate of fluids, bark is the moſt efficacious remedy; but where the diſcharge depends more upon the ſtate of the fluids, in order to correct or evacuate the acrimony, a courſe of mercurial medicines, as the alterative mercurial pills, two of which may be taken twice a day, with one or two pints of the decoction of the woods, (No. 87, 88.) bid faireſt for ſucceſs.

There is a ſpecies of complaint very common belonging to this place, which here calls for our attention, and that is, a

BOIL, or BILE, though this ſeldom terminates by reſolution, but commonly maturates—it is a hard circumſcribed tumour, riſing to a point, hot, red, and very painful, which, maturating, may be let out, or left to burſt, from whence a ſmall portion of matter only will iſſue forth, in proportion to the ſwelling, leaving a ſlough behind, which is called a CORE, and muſt be caſt off before the wound can be healed.

In its hard and painful ſtate, we can have no expectations of diſcuſſion; our endeavours, therefore, are to be confined to haſtening the ſuppuration, as we have before directed, (478.) or apply bean-meal and honey, which is a favourite remedy with ſome---when it is opened or burſt, we muſt proceed as before under the ſame circumſtances in abſceſs. (478.)

But theſe eruptions very often originate from a depraved ſtate of the fluids, which occaſion their frequent returns, and are extremely troubleſome---here we muſt have reference to the alterative courſe before recommended, (479.) which muſt be perſiſted in for ſome time, now and then interpoſing gentle cooling purgatives.

Thus far we have ſpoken of thoſe inflammations which lie ſuperficially, and are alleviated by *appeaſing* applications; but ſometimes the ſeat of the complaint will be too internal for them to become effectual, we then apply over the part ſtimulants, which have been found highly efficacious in producing reſolution---indeed, where complaints have been ſlight, applications of hot ſand or ſalt, ſtimulating cataplaſms, as of muſtard,

tard, pellitory, horſe-radiſh, Burgundy pitch, volatile liniments rubbed well upon the part, have been found ſerviceable auxiliaries; but when the ſymptoms have been more ſevere, bliſters applied over the part contribute the moſt readily to promote reſolution.

Theſe remedies, and the ſedatives and emollients we have before ſpoken of, where the cauſe has been exceſs of the vibratory motion of the veſſels dependent on ſome ſtimulus, and external remedies can be applied, have been thought neceſſary---or when inflammation proceeds from fractures, wounds, contuſions, or ſuch like cauſes, diſcutient fomentations, (No. 85.) are moſt of all to be relied on---when it depends *on local relaxation*, or *a decreaſe of vaſcular reſiſtance*, as it ſometimes does, particularly in inflammations of long ſtanding---bleeding and purging ſhould be cautiouſly adviſed, and all emollient poultices and fomentations omitted; for theſe, by their relaxing properties, will add to the cauſe---a contrary plan muſt be adopted, calculated to give ſtrength and activity to the veſſels, that the offending cauſe may be repelled.

For local applications, alum, white vitriol, acetated litharge, lapis calaminaris, and tutty prepared, mixed with roſe water, are occaſionally uſed; as are alſo tincture of roſes, and ſlight decoctions of bark, and eye-waters; gargles made of theſe are well adapted to relieve inflammatory complaints ariſing from a debilitated and relaxed ſtate of the veſſels---and where the general ſtate of the habit is ſo relaxed, as to demand the uſe of tonics, or ſuch things as invigorate the ſyſtem, bark and cold bathing are highly uſeful.

By the modes we have laid down, we ſhall almoſt always be able to conquer any common inflammation; or conduct our patient through with the greateſt eaſe and ſafety, if abſceſs ſhould take place---but there are ſome niceties to be obſerved, which we ſhall particularize.

Fomentations ſhould never be puſhed too far; for, after taking off the violence of vaſcular motion, if continued, they induce a ſtate of relaxation in the fibres, from which ſucceed debility and obſtinate tumors---inſtead, therefore, in perſevering in their uſe, when exceſs of vibratory motion is ſubdued totally, and in many caſes when it is allayed, corroborants then become neceſſary, (No. 86.) or ſomething of a ſimilar nature.

With regard to abſceſſes, we muſt obſerve, that they all point, and the contained matter endeavours to make its way to the parts where it finds the leaſt reſiſtance---hence thoſe formed in the lungs rupture internally; thoſe in the viſcera of the belly move externally —thoſe which are deep ſeated, and form under ſtrong tendinous expanſions, run along the ſpaces between the muſcles, and appear at a conſiderable diſtance from whence they firſt originated.

Beſides, they do not all originate from inflammation preſerving its regular courſe; they are ſometimes critical, the effect of nature freeing the conſtitution from ſome morbid matter, by throwing it out of the circulation, and depoſiting it in ſome local ſituation, which is attended with the moſt happy conſequences, admit the vital organs, or the parts of high importance in the habit

habit to eſcape, from its being depoſited in them. Abſceſſes of this kind are generally preceded by ſome fever; and this depoſition of matter is called metaſtaſis, or tranſlation, which occurs chiefly in parts where the veſſels labour under ſome uncommon weakneſs, from ſome cauſe which has left them in that ſtate.

Under this circumſtance, as ſoon as ever the ſkin is in a proper ſtate of thinneſs, the matter muſt be let out by inciſion, if it can be come at, elſe would it, by too long continuance, diſſolve too much of the ſolid parts, deſtroy the texture of the nerves and blood-veſſels, produce a caries, or mortification of the bones, by penetrating through the membrane which covers them, and lay the foundation for a hectic fever, from the matter being taken up by the abſorbent veſſels, and carried into the habit.

In caſes of EXUDATION, (472.) where the ſurface appears only excoriated, not ulcerated, we can give the happieſt aſſiſtance, when it ſhews itſelf externally, by *internally* exhibiting ſuch things as tend to promote reſolution; and having recourſe *externally* to ſuch as are calculated to cleanſe, heal up, and ſtrengthen.

And when ſuch is the circumſtance on the membranes of the breaſt, of the belly, or the external ſurface of the viſcera, as it ſometimes is, we are aſſured, from the appearances on diſſection, where there has been no perceptible ulcerations or deſtruction of the ſolids, though matter has been found in theſe cavities; by early advice judiciouſly given, many might be ſaved from ſome of our moſt fatal complaints, pulmonary, and ſome other conſumptions; for many of

theſe ariſe not, *in the firſt inſtance*, from ulcerations or little glandular tumors in the lungs, called tubercles, but from matter exuded from membranous ſurfaces, which acquire a degree of acrimony, and then, by melting down the ſolids, cauſe ulcerations: and I have no doubt but by a very early application to ſuch modes as we have ſpecified for reſolution, theſe miſchiefs might be often prevented---but here the great misfortune is delay; patients, in the infancy of this complaint, by dabs, noſtrums, and old family preſcriptions, loſing the favourable opportunity which ought to be given to the well-informed phyſician, applying for ſuch aid only when ſome of the internal parts have ſuffered irrecoverable injury.

Though we have before ſpoken of the eryſipelas, or Saint Anthony's fire, which ariſes from a febrile cauſe, there is another ſort which ſometimes ſucceeds external injury; and in this, if the inflammation runs high, bleeding and purging are highly efficacious; and in the intermediate times, betwixt the adminiſtrating of purgatives, I depend upon ſaline diuretics, (272.) and even thoſe purgatives which I prefer, are ſuch as moſt powerfully evacuate the ſerous humours, ſuch as vitriolated natron, Rochelle ſalt, regenerated tartar, jalap, ſyrup of buckthorn, &c.

The external applications in theſe caſes ſhould be ſuch as will expel the obſtructed fluids through the pores of the ſkin; hence diluent fomentations are recommended, decoction of linſeed, and white poppy heads, with elder and chamomile flowers, and a proper proportion of ſoap liniment, one ounce and a half

to

to two ounces to a quart, whilſt there is no break upon the ſkin---chalk, or fine flour, ſpread upon the part, and confined with a fine rag---and lotions of the vegeto-mineral water are thought by ſome highly ſerviceable, where reſolution is the aim.

But when pimples or painful bliſters make their appearance, equal parts of lime-water, oil, vinegar, and camphorated ſpirit of wine, form an efficacious compoſition to lay on the inflamed part, by means of a rag dipped into, and well loaded with it---or the ointment called unguentum tripharmacum, or that of acetated ceruſs, have been conſidered as proper applications.

We muſt now proceed to ſpeak on MORTIFICATION, another termination of inflammation, (473.) which generally proceeds in the following manner. At firſt the ſwelled part begins at the point to grow yellow, the pain is mitigated, and a dingy colour comes on; the ſkin is flabby and ſoft, retaining the impreſſion made by a finger upon it, it loſes almoſt all ſenſation, and grows livid—a tumid elevation of the part is perceived, which diffuſes itſelf around—there appears puſtules full of a thin yellowiſh acrimonious liquid, which are black at their baſis—then the ſkin and parts underneath corrupt, become dead, black, loſing all ſenſation, and diſſolve into a fœtid ſtinking ſanies—the mortification creeps onwards, and ſeizes the neighbouring parts—at length ſhivering, fever, cold ſweats, ſmall and weak pulſe, and fainting, beſpeak the approach of death.

In the beginning, when the ſource of this miſchief has been external injury, and there is much ſtrength of

conſtitution, indicated by a full, hard, quick pulſe, high degrees of heat, pain, and dryneſs, the cooling method is to be purſued, as if reſolution was to be brought about; and though in this we cannot hope to ſucceed, we are warranted in this mode of procedure, by the extreme violence of the ſymptoms, with intent to bring on a ſtate of ſuppuration, by checking the vehemence of the circulation, and preventing the veſſels from being ruptured—beſides, exudation would be favoured from the continuance of relaxing and emollient fomentations.

But mortifications ariſe from very different ſources, and affect different conſtitutions—ſhould they happen to patients, therefore, whoſe blood is in a thin, acrid, putreſcent ſtate, which will be indicated by debility of the pulſe, loſs of ſtrength, lowneſs of ſpirits, fœtid thin acrimonious diſcharges, and, ſhould blood be taken, by its texture being very weak, we muſt have recourſe to invigorating and cordial remedies; as bark, wine, mineral acids, and ſuch like, in order to prevent the acceſs of gangrene, and produce a ſeparation of the part affected; and, in caſes of great pain, opiates have been adviſed with very fortunate effects; indeed, whether the cauſe is internal or external, the free uſe of opium is directed, and conſidered as the greateſt internal cordial known—as an external application, the antiputreſcent lotion, (No. 90.) is recommended to be applied frequently, warm, as it is alſo ſtimulant and digeſtive—cataplaſms of cummin-ſeed, and the carrot poultice, are much approved; but if emollients are

mixed

mixed with antiſeptics, (298.) they are ſaid to aſſiſt in the ſeparation of the putrid parts, and ſtopping mortification.

The laſt termination of inflammation is SCIRRHUS, (474.) or indolent tumor, which ariſes from obſtructions forming in ſome of the glandular parts, as before deſcribed, where either no ſuppuration takes place, or, if it does, it is in ſo ſmall a degree, that it has not power to melt down the ſolids ſufficiently to remove the induration—or it may be brought on by the too long uſe of warm fomentations, ſoliciting too free and long continued flux of humours, relaxing the veſſels of the parts, hence occaſioning hard ſwellings, which are not eaſily removed.

Now theſe ſwellings which we here conſider are totally free from all acrimony of any peculiar nature, and, as the fluids are in a ſound ſtate, it is often the moſt eligible practice not to interfere by any applications—becauſe in young ſubjects they will very often gradually wear away; in older ones continue generally without creating any uneaſineſs or inconvenience—but ſhould the hardneſs be ſo conſiderable as to require particular attention, warm vapour or ſteam directed to, and confined to act upon the part affected, is one of the moſt efficacious applications in this caſe.

Sometimes theſe tumors are ſoft and flabby, then frictions, and well adapted bandages, where they can be applied, are uſeful; or letting cold water fall from ſome height upon the part, or pumping upon it, ſeems beſt calculated to ſucceed.

Thus far has it been neceſſary to premiſe, before we enter on the inflammation of the different parts, wherein the treatment of the inflammatory ſymptoms will be nearly ſimilar; but there will be ſome deviation neceſſary on account of the parts affected—for the INFLAMMATION OF THE BRAIN will require a different treatment from that of the *eye*—OF THE EYE from that of the *lungs*—OF THE LUNGS from that of the *inteſtines*, &c. to which we ſhall now proceed.

CHAP. II.

INFLAMMATIONS OF THE HEAD AND NECK.

§ 1. PHRENITIS, INFLAMMATION OF THE BRAIN.

THIS is ſo called from the Greek word *phren*, mens, the mind; becauſe the brain is ſuppoſed to be its ſeat.

DESCRIPTION. The ſymptoms at the onſet are, with reſpect to the general affections, ſimilar to what occur in the *beginning* of the inflammatory fever, only the head ſeems to be more violently affected; for in this there is pain and pulſation of the head, with a ſounding noiſe, a ringing in the ears, and diſturbed ſleep—the eyes are painful and inflamed, almoſt always ſhunning the light—the countenance is puffed, the hearing acute, and the patient is irritated from the ſlighteſt noiſe—the pulſe, for the moſt part, is weak,

ſometimes

ſometimes hard, *always* low and depreſſed—the urine looks pale like water—and continued watchings are protracted to the eighth day—the pulſation of the carotid arteries is perceptible—ſometimes blood flows from the noſe—there is great debility, anxiety, and frequent ſighing—the tongue is ſometimes white and moiſt, ſometimes black and dry—the patients are uncommonly iraſcible, labouring under a ferocious delirium and convulſions.

CAUSES. The *remote* or *inducing*, ſevere drinking of inebriating liquids, particularly ardent ſpirits—watchings, long expoſure to the ſcorching rays of the ſun, particularly if the head is uncovered—violent rage—too deep and long continued thinking—exceſſive grief—violent love—a ſuppreſſion of the piles, and thoſe diſcharges in women after child-birth, called lochia.

The *proximate* or *immediate* CAUSES, a true inflammation of the membranes of the brain, or a congeſtion of blood in the body of the brain, or both conjointly.

CHARACTERISTIC SIGNS. An acute febrile affection, attended with pain of the head—redneſs of the face and eyes—incapability of bearing the light or ſound—perpetual watching—a violent delirium, or delirium attended with ſome degree of apparent drowſineſs.

This diſeaſe generally terminates between the ſeventh and fourteenth day, by reſolution—hæmorrhage from the noſe; in women, by a flow of the menſes—looſeneſs, or depoſition of a copious ſediment in the urine;—but ſhould not ſome of theſe occur, ſuppuration or mortification

fication is the conſequence: it often, though, degenerates into other diſeaſes, as mania, i. e. delirium or madneſs without fever, lethargy, melancholy, or idiotiſm—when people recover, they will be affected a long time with giddineſs, weakneſs and pain of the eyes, quickneſs of hearing, and a heavineſs of the head.

We ſhould be particularly careful in diſtinguiſhing this diſeaſe from the delirium, that common attendant in many fevers: and this knowledge may be acquired by obſerving, *that in this ſpecies the delirium comes on firſt, and is perceptible and violent before there is any great degree of fever*—in other caſes it is conſequent to fever which has continued for ſome days before the delirium is manifeſt; and the degree of phrenzy is correſpondent to the degree of fever; but in the true inflammation of the brain the degree of fever is never adequate to the delirium, which is equal to what we meet with in real madneſs, from which the inflammation of the brain is ſcarcely to be diſtinguiſhed, but by the ſhortneſs of the continuance; as in the ſpace of a few days it muſt either inevitably terminate in recovery or death.

This diſeaſe is either idiopathic, (469.) or ſymptomatic, (469.)—the *firſt*, wherein the head is primarily affected, rarely appears in temperate climates—but the *ſecond* very often occurs, and moſt frequently about the criſis of fevers; and is generally attended with chillneſs, tremor of the joints, diſtenſion about the pit of the ſtomach, coldneſs of the extremities, thin urine diſcharged too copiouſly, or too ſparingly; and moſt commonly, if violent, proves mortal, from the conſtitu-

conſtitution being reduced to a ſtate of great weakneſs from the preceding diſeaſe.

From the great conſequence of which the brain is to the life of man, this becomes a moſt dangerous diſeaſe, from that part being affected—men experience greater degrees of violence in this diſeaſe, and recover with more difficulty than women—the more the patients are, and the more they recede, from their natural ſtate and diſpoſition, the greater is the danger—bleeding at the noſe is a good omen; but if the phrenzy changes into a lethargy, it is bad; and total loſs of, or a trembling voice, convulſions, hiccough, may be looked on as extremely unfavourable ſymptoms.

CURE. In a caſe ſo deſperate as this, without we can diminiſh the violent force of the circulating fluids againſt the ſides of the veſſels, remove the obſtruction, and take off the congeſtion, and that ſoon, from the delicate texture of the brain, it muſt end fatally—our applications, therefore, muſt not only be powerful in themſelves, but moſt expeditiouſly adminiſtered, with intent to divert the flow of blood from the head, at the ſame time attempting to allay the violence of vaſcular action, and ſtrengthen the veſſels of the part affected.

For theſe purpoſes, therefore, we ſhould have recourſe to bleeding—ſome adviſe in an erect poſture, copiouſly, and from a large orifice, till the patient faints, giving preference to the large vein of the neck, called jugular, or the temporal artery; or, where the menſes are obſtructed, to the veins of the feet; and

this

this muſt be repeated according as the ſtrength of the patient will permit—if the pulſe, as ſometimes happens, will not allow this, particularly after the third day, then cupping-glaſſes or leeches muſt be applied to the temples, or the internal part of the noſtrils muſt be ſcarified, and blood taken away in one of theſe modes—and immediately after ſmart purges of the cooling kind, (264, 265.) muſt be adminiſtered, or glyſters—the lower extremities ſhould be bathed in warm water, or the feet and legs wrapped up in warm moiſt cloths or flannels—the head ſhould be ſhaved, and waſhed with cold vinegar, or cold water poured upon it; nay, ſome adviſe even the application of ice; and after proper evacuations, when there appears a reduction of ſtrength, a bliſter may be applied to the head—large doſes of nitre, mixed with a little camphor, may be given every four or five hours, or fixed ſal ammoniac, (272.) or CLUTTON's *febrifuge ſpirit*, ſo called, may be mixed freely with the patient's drink, which ſhould be of the diluting and watery kind---muſtard poultices may be applied to the ſoles of the feet; and, in fine, every thing which can ſolicit the blood from the head, and abate the violent motion of the fluids.

The bedchambers ſhould be large, dark, and cool—every thing ſhould be kept extremely quiet; the poſture ſhould be as erect as poſſible, or, at leaſt, the patient ſhould lie with his head elevated.

If matters, by the means here made uſe of, take not a favourable turn within the firſt four or ſeven days,

days, there comes on a drowſineſs, and propenſity to ſleep, which ſoon puts a period to the unhappy patient's exiſtence.

Sometimes we find it goes off by the efforts of nature producing ſome evacuation, (489.) which, ſhould they come on before the veſſels of the brain ſuffer much from being over diſtended, the termination of the diſeaſe may be very fortunate — if not till the veſſels have been much injured, the ſenſes ſeldom return perfectly to their original ſtandard—nay, ſome affirm, it ends in ſtupidity, and madneſs, which are rarely cureable.

§ 2. OTITIS, or OTALGIA — from the Greek words, *ous*, auris, the ear; and *algos*, dolor, pain; —

INFLAMMATION OF THE EAR.

By this is meant an inflammatory ſtate of the internal parts of the ear, whoſe membranes, from their being well ſtored with nerves, are extremely ſenſible; and from being attached to bones, feel pain very acutely.

DESCRIPTION. An inflammation of the more internal parts, attended in common with great pain, and that pulſatile, or throbbing head-ach, and ſome ſlight feveriſhneſs; ſometimes when it affects in a more ſevere degree, the fever is ſtronger—the head more painful, accompanied with delirium.

CAUSES, *remote* and *inducing*. Any extraneous body inſinuating itſelf into the ear, that has the power of exerting any ſtimulus;—acrid humors falling upon the membranes of the ear;—obſtructed perſpiration;

---currents

—currents of cold air pouring forcibly into the ear, through narrow crevices, or cracks in doors or windows.

The *proximate*, or *immediate*, are ſimilar to what we have before ſpecified, and which occurs in all inflammation, where the parts are in a ſtate of prediſpoſition, ſufficient to feel the effects of thoſe acting cauſes which are more remote;—indeed, the proximate and immediate cauſes of theſe complaints are ſo exactly ſimilar, that we ſhall have no occaſion to ſpecify them.

CURE. When the affections are ſlight, a little warm oil, with a few drops of tincture of opium, may be dropped into the ear;—or a decoction of poppy heads may be injected—theſe will ſometimes take off the complaint when trifling:—but ſhould it be more ſevere, bleeding and purging may be requiſite—applying alſo cupping-glaſſes, or leeches behind the ears, and bliſters—bathing the feet alſo in warm water—and when the pain is violent, an opiate, No. 4, may be adminiſtered at bed-time.

But ſhould the throbbing pain, notwithſtanding our efforts, ſtill continue, ſuppuration will be the conſequence; which we muſt endeavour to promote by warm poultices applied externally; and wait for the burſting of the abſceſs;—which, when it happens, we muſt endeavour to keep the ulcerated part clean, by injections of warm water in which is diſſolved a little ſoap;—or of barley water, to four ounces of which add—one ounce and an half of honey of roſes, and half an ounce of tincture of myrrh—this will aſſiſt the

diſ-

diſcharge of matter, keep the ulcerated parts clean, and expedite their healing.

§ 3. OPHTHALMIA—from the Greek word, *ophthalmos*, oculus, the eye; —

INFLAMMATION OF THE EYE.

This diſeaſe is ſo very obvious to every common obſerver, that there ſeems ſcarce a neceſſity for putting down the appearances, in order to diſtinguiſh it; however, to preſerve the regularity we have adopted in other complaints, we ſhall give of it a conciſe view.

DESCRIPTION. This complaint at the beginning is attended with heat, redneſs, and ſwelling, or fullneſs of the eye---and often feels as if a particle of ſand, or a ſmall fly, had got into it, and there fixed ---the eye is painful, tears flow, which appear hot and ſcalding---the angles of the eye are often filled with a viſcid yellowiſh matter, particularly after ſleeping--- the ſight is weak, and all light is offenſive---*in the more ſevere ſpecies*, the pain is very acute---the pulſe quick and rather hard---the light intolerable---there is a perceptible pulſation of the arteries---and the eyelids, with the circumjacent parts, ſwell; but *when it is ſtill more ſevere*, the membrane covering the white of the eye elevates itſelf above the darker coloured part, called cornea, from its horny appearance---and the patients complain of flies flying before them, and feel other unpleaſant ſenſations of this kind, the effect of imagination. ---Afterwards ſucceed ſuppurations,

ſpiſſitude,

ſpiſſitude of the humours---ſpots upon, and thickneſs of the cornea itſelf.

From this account there appears to ariſe three material conſiderations: FIRST, whether it is ſlight, affecting only the veſſels of the outward membrane of the eye;---SECOND, whether it is very ſevere, extending itſelf to the eyelids, and their edges, called tarſi; THIRD, whether it is extremely violent, fixing its ſeat in the internal veſſels of the eye itſelf, and in thoſe of the membrane called *retina*, at the bottom of the eye, which is conſidered the ſeat of viſion; in which caſe it is attended with high degree of fever, intolerable pain, and often delirium. For theſe diſtinctions will make ſome alterations in our modes of cure.

CAUSES. The *remote*, or *inducing*, are—external injuries occaſioned by blows—duſt getting into the eye, or other ſtimulating bodies—a free admiſſion of cold wind---ſweats ſuddenly ſuppreſſed—looking frequently, or long, at the fire, the ſun, or ſtrong glaring colours—expoſure to the cold air of the morning and evening, which ſucceeds hot and ſun ſhiny weather---acrid and metalline fumes---couching, or extracting a cataract. It alſo may proceed from internal cauſes---ſuch as the ſuppreſſion of ſalutary evacuations---humors repelled---drying up of iſſues---ſetons---fiſtulas ---or ulcers---indigeſtion---too long watchings---night ſtudies---other diſeaſes of the eyes---ſmall pox---and meazles.

CHARACTERISTIC SIGNS. Redneſs, and pain in the eye---with incapability of bearing the light.

CURE. With regard to this we are to take into our account the immediate cauſe---whether it is an increaſed irritability in the veſſels; or a want of proper reſiſtance in their coats; or they both co-operate together---for, according to the acting cauſe, ſo ſhould our applications differ; as what would in one caſe produce a good effect, would in the other be attended with dangerous, or at leaſt diſagreeable effects.

In the ſlighter degrees of this complaint, the cure is perfectly eaſy, as little more is requiſite than external applications---waſhing the eyes with warm milk and water, mixed with a little brandy---conſerve of roſes---roaſted apples, and ſome ſuch remedies.

But in more ſevere affections, if the habit is full, general bleeding and purgatives are neceſſary, with a cooling regimen---to which, if the diſorder does not ſoon give way, not leſs than three leeches ſhould be applied, as near each other as poſſible, in the hollow of the temple neareſt the eye affected---opening the jugular vein is often ſerviceable;---bleeding in the eye itſelf has by ſome been ſtrongly recommended; but the operation is apt to irritate, and is only neceſſary when the inflammation is kept up by a ſpeck in the eye, which is fed by one or more blood veſſels, then they may be divided.

In obſtinate caſes, keeping the head ſhaved is highly proper, and applying bliſters about the ſize of half a crown over the orifices made by the leeches, is uſeful; ---bathing the feet in warm water ſhould not be neglected.

With reſpect to the local applications, the chief, and moſt uſeful, is the tinctura Thebaica of the London Pharmacopæia as an opiate, joined with ſome ſtimulant, for without, it will not anſwer;---at firſt the anodyne eye-water (No. 91.) may be applied to the eye two or three times a day. In ſlight caſes, this is often ſufficient; and, indeed, in the more obſtinate, two or three drops of the tincture may be dropt into the eye two or three times a day.---The body ſhould be kept cool by proper diet and medicines, and the eyes free from any thing which can irritate them.

In ſome caſes, though, where the inflammation has been long continued, its duration will be apparently owing to want of proper reſiſtance in the veſſels---hence muſt recourſe be had to ſuch medicines as give ſtrength and activity to them; ſtill ſome caution is here neceſſary---they ſhould only be applied when the eye is in the weakeſt ſtate of inflammation, which generally happens in the morning, after the eye has been kept ſome time free from any irritating cauſe.---In theſe caſes the coagulum aluminoſum of the old London Diſpenſatory may be mixed with a common poultice, and applied to the eye affected for three or four hours in a morning---and in the remainder of the day, tincture of opium---afterwards as the eye gets ſtrength the vitriolic ſolution, No. 92, may be uſed.

By this method I have ſeen inflammations of the eyes of long ſtanding, cured, which had reſiſted every other mode---the quantity of the vitriol may be gradually increaſed to 10 or 12 grains.

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In all inflammations of the eyes arifing from common cauſes, one of the modes above ſpecified will generally ſucceed---only we ſhould be careful not to uſe any of the more ſtimulant applications, till the inflammation begins to relax of its violence, for if they are uſed too ſoon, they will rather increaſe, than ſubdue the malady.

But ſometimes this diſeaſe will be occaſioned, and ſupported by ſome morbid humour in the habit---as that called ſcrophulous --- venereal --- or ſome other which we are incapable of diſcovering.—In the two former caſes, we muſt make uſe of thoſe remedies pointed out in the treatment of thoſe complaints—in the latter, a courſe of alteratives in which mercury has the greateſt ſhare, will be moſt efficacious. Under theſe circumſtances I have known ſmall doſes of calomel, with antimonial powder and rhubarb, or jalap, given twice a day, and waſhed down with the decoction of the woods, interpoſing proper purgatives once in a week or ten days, be very ſucceſsful—and greatly aſſiſt the application of external remedies.

In obſtinate caſes, where bliſters have been ineffectual—iſſues, and ſetons in the neck, have been recommended;—or having the lobes of the ears pierced, and exciting a diſcharge by ſkains of ſilk being paſſed through them in the manner of ſetons.

The gluing of the eyelids together, ſhould be prevented by inſinuating a little mild unctuous medicine between them, before the patient goes to reſt.

Notwithſtanding what has been ſaid reſpecting inflammation of the eyes reſulting from a relaxation, or

attended by that ſtate of the veſſels, it is ſometimes owing to intenſeneſs of motion—which is diſcoverable from *the great heat*,—*dryneſs*, and *very ſevere pain*,—which are concomitants;—then bathing the eye with warm milk and water, in which poppy heads have been boiled, afterwards applying a poultice of this decoction thickened with crumbs of bread, incloſed in thin cambrick, will be neceſſary. But in order to prevent the acceſſion of theſe complaints in thoſe who are ſubject to the returns, beſides guarding againſt the remote cauſes (496.) iſſues have been recommended—taking away blood about the equinoxes---purging occaſionally---a cooling diet---avoiding reading in the night, particularly ſmall print---or, in fine, doing any thing, that can too much fatigue the eyes.

§ 4. QUINSY.

An abbreviation of the word from the French *ſquinancie*, ſore throat---the Greeks term it, CYNANCHE, from *kuon*, canis, a dog, and *anko*, ſtrangulo, ſtrangulate---becauſe patients afflicted with this complaint were ſuppoſed, in the difficulty of reſpiration, to uſe their tongues like a dog—and by the Latins ANGINA, from the Greek word *anko*.

This is an acute affection of the throat, divided into two ſpecies—the inflammatory, and malignant—of the firſt of theſe ſome authors form varieties, according to the different parts they affect.

1. TON-

1. TONSILLARY QUINSY.

Becauſe it affects the membrane on the ſuperior parts of the throat, particularly the *tonſils*, with tumor and redneſs.

2. TRACHEAL.

In Scotland called CROUP, becauſe it affects the muſcles of the *trachea*, or membrane covering its upper part, the windpipe; in which diſeaſe in inſpiration the voice is rattling and hoarſe, there is a ſhrill cough, with no apparent tumor, and a little difficulty of ſwallowing.

3. PHARYNGÆAL.

Becauſe the *pharynx*, in the lower part particularly of the fauces, is affected with redneſs, the ſwallowing is very difficult and painful, though reſpiration is ſufficiently eaſy.

4. PAROTIDÆAL.

In England called MUMPS, in Scotland, BRANKS, becauſe there is a conſiderable ſwelling of the parotid and maxillary glands, reſpiration and deglutition ſlightly diſturbed.

All theſe are attended with an inflammatory fever, though the laſt, or the parotidæal, is of a very mild ſort.

The ſecond ſpecies is called the TONSILLARY MALIGNANT, OR ULCEROUS QUINSY, becauſe it affects the ſame parts as the inflammatory tonſillary, (ſee above.) with tumor, redneſs, and with white or grey coloured ſloughs, ſpreading and covering ulcers, attended with a

nervous or putrid fever, and red efflorescences—hence ſtiled by ſome the malignant ſcarlet fever. (452.)

Of all theſe we ſhall proceed to treat in the order they are ſet down—and, firſt,

THE TONSILLARY INFLAMMATORY QUINSY, OR COMMON SORE THROAT.

DESCRIPTION. In this the tonſils and ſuperior part of the fauces are affected—in general the inflammation begins in one tonſil, then ſpreads acroſs the palate, ſeizes the uvula, and other tonſil.

Though conſiderable pain attends the action of ſwallowing if only one ſide of the fauces is affected, yet can that action be performed tolerably well; but the pain becomes intolerably ſevere when both ſides are affected, and ſwallowing is performed with extreme difficulty; indeed, the pain is ſometimes ſo great as, in delicate and irritable habits, to occaſion convulſions.

It may, however, appear ſingular, that more pain ſhould be felt in ſwallowing liquids than ſolids; but that is the fact, becauſe a greater portion of muſcular fibres are employed in the deglutition of the former than the latter.

So long as the inflammation confines itſelf to the parts above deſcribed there is little danger, more particularly if the neck appears puffed up, for this ſeems to indicate leſs danger of ſuffocation, and is therefore conſidered a favourable omen.

But if the inflammation extends itſelf to the muſcles of the larynx, in that degree as to impede the opening of the glottis, or ſuperior part of the windpipe, the

complaint becomes extremely precarious, becauſe then there will be great apprehenſion of ſuffocation.

Or ſhould the brain or lungs be affected by a tranſlation of the morbid matter, from the one occaſioning violent head-ach and ſtrong delirium; and from the other oppreſſion of the cheſt and difficulty of breathing. If to what we have here ſaid we add the febrile ſymptoms which commonly attend inflammation, and the appearances in the throat, (502.) we cannot avoid diſtinguiſhing the complaints.

CAUSES. The *remote* or *inducing* are, perſpiration obſtructed, particularly in the neck—the admiſſion of cold air into the fauces, eſpecially if it ruſhes rapidly into the mouth, and ſtrikes them forcibly—violent and long continued ſinging—ſhouting, or too ſevere exerciſe of the part—any acrid ſtimulating particles, or hard pungent bodies adhering to the parts—drinking too cold water—ſuppreſſed or impeded evacuations—or a peculiar ſtate of the air rendering this complaint epidemical.

The *proximate* or *immediate*, ſimilar to thoſe of other inflammatory complaints.

CHARACTERISTIC SIGNS. Redneſs, tumor, heat of the tonſils, rendering deglutition painful, attended with febrile inflammatory ſymptoms.

CURE. The ſame rules are to be obſerved as in other inflammations, reſpecting the general treatment, ſuch as bleeding, purging, cooling, diluting medicines, and regimen. With regard to local application, it is of uſe to apply ſtupes of flannel dipped in ſpirits of ſal ammoniac, or hartſhorn, mixed with a little oil, and applied to the throat in the ſlighter caſes—in the

more ſevere, bliſters; for theſe ſolicit the matter from the internal to the external parts.

Gargles alſo of ſage tea and vinegar, or infuſions of elder and chamomile flowers, in equal parts of water and vinegar, applying the ſteams of this to the throat; theſe are of infinite uſe, and give great relief, favouring the exudation and diſſipation of the obſtructing fluids.

After the inflammation is abated, gargles more aſtringent ſhould be uſed, made of tincture of roſes, or red port, with the vitriolic or muriatic acid, ſweetened with honey—alſo to them may be added a ſmall portion of alum, or weak decoctions of bark, with the acids above-mentioned, or with alum; for theſe will give ſtrength to the fibres, which, from over diſtenſion, have been weakened and relaxed—and, for gargling the throat, perhaps, ſyringes had better be made uſe of, both on account of eaſe and certainty in reaching the part affected.

By this mode the cure in common will be completed within the courſe of four or five days; but if within this time the inflammatory ſymptoms ſhould not become milder, and the inflammation itſelf ſubſide, then will little doubt remain of ſuppuration taking place; diſcoverable by the following SYMPTOMS OF ABSCESS forming:---*the febrile ſymptoms continue, though in a ſlighter degree---the pulſe grows ſofter---the florid colour of the inflamed part abates---the pain becomes more bearable---and ſlight ſhiverings come on frequently.*

Here we muſt endeavour to promote ſuppuration as faſt as poſſible, by applying maturating poultices to the throat externally; and internally, decoction of figs; or infuſion of linſeed ſhould be drank very warm,

and

and ſwallowed gradually; carefully, at the ſame time, watching for the appearance of abſceſs, which generally diſcovers itſelf in a few days, by a whitiſh tumor, and fluctuation of a fluid to the touch—ſhould not this burſt of itſelf, which, though, is generally the caſe, it ſhould be opened as early as may be, and detergent gargles of barley-water, honey of roſes, vinegar, and tincture of myrrh, may be had recourſe to. (No. 93.)

When the abſceſs is perceptible to the ſight, and within the reach of external remedies, this method muſt be purſued; but ſometimes it forms itſelf ſo low down as not to be within the reach of inſtruments; we muſt therefore wait for its burſting; and ſhould, before this happens, the tumor be ſo large as to prevent ſwallowing, the patient muſt be ſupported by broth or milk glyſters; and bliſters and ſtimulant poultices ſhould be applied to the throat externally, in order to ſolicit the morbid matter outwardly.

The conſequences in theſe caſes are very rarely fatal, when there is a ſuppuration; however alarming may be the appearances, or tedious the proceſs.

But, now and then, this complaint ariſes from the want of proper reſiſtance in the veſſels of thoſe parts, diſcoverable by the relaxed ſtate of the ſolids, manifeſted *by weaker degrees of heat and pain, and more ſlight inflammatory appearances reſpecting the colour of the parts* as they are leſs red, than in the former.

In theſe caſes copious bleeding is rarely neceſſary; purgatives are more to be depended upon, and the aplication of ſtimulants and bliſters locally and externally—gargles ſhould be of the pungent kind, made

of

of the infuſion of horſe-radiſh, or muſtard-ſeed, or ſome other of the pungent ſtimulants, (221, 222.) for theſe attenuate the viſcid mucus which clogs the follicles or cells of the tonſils, and other contiguous glandular parts, that crowd the fauces, by ſtimulating the veſſels to an increaſe of proper action on their ſtagnating mucus; for theſe ſore throats are conſidered as pituitous.

In habits like theſe of the phlegmatic kind, (75.) abſceſſes ſeldom ariſe; but ſhould that be the caſe, they require the ſame mode of treatment as above ſpecified; to which muſt be added tonic and corroborant medicines internally, as well as externally, in order to give tone and firmneſs to the veſſels after proper detergents, and add ſtrength to the conſtitution, as bark, ſteel, with a generous and nutritious diet.

The ſame mode muſt be purſued in the SECOND and THIRD SPECIES, in their inflammatory ſtate; to which if the diſeaſe does not yield, and there is reaſon to be afraid of ſuffocation, from the high degree of inflammation of the muſcles of the larynx, preventing proper reſpiration, recourſe muſt be had to bronchotomy, or opening the windpipe, though not without extreme neceſſity, and then it muſt be performed by the hands of the moſt ſkilful ſurgeon, for it is attended with the utmoſt danger.

But ſometimes the inflammation not only attacks the membrane lining the upper part of the trachea, but extends itſelf down on the interior ſurface into the lungs, which ſurface is found, on diſſection, to be covered over, and the paſſage for the air almoſt filled up with a thick

ſlough,

ſlough, having a fibrous membrane-like appearance, which is concluded to be the viſcid remains of mucus thrown off by exudation from the inflamed ſurfaces—and is diſcoverable by a *peculiar ſhrillneſs of the voice, like the crowing of the cock, with a cough*, but no ſickneſs, nor at firſt much difficulty of breathing.

This diſeaſe is at certain times epidemic, and ſeizes chiefly children, and runs to its fatal termination ſo extremely rapid, that little chance is given to any medical applications, from the want of time—immediate vomiting, and bliſtering the throat, are the whole we can, perhaps, depend upon for any the leaſt proſpect of ſucceſs. This variety of the tracheal quinſy is called the CROUP, and is more frequent in Scotland than elſewhere.

The FOURTH SPECIES, or the PAROTIDEAL QUINSY, or MUMPS, called alſo MAXILLARY, from its affecting the maxillary as well as the parotid glands, and alſo the muſcles and ligaments which raiſe up and connect the upper with the lower jaw, from which is neceſſarily felt ſevere pain in opening the mouth.

In this the ſwelling is generally external, increaſing ſo much in a few days, particularly in the lower part of the face, and under the chin, as almoſt to obliterate the features, though the attendant fever is but ſlight.

Saline purgatives, with nitrous medicines, moderate bleeding, and external ſtimulants, chiefly volatile liniments, are all that are required, keeping at the ſame time the head and face warm, and free from external cold.

But there is a ſingular peculiarity now and then attending this complaint; for ſometimes on the ſwelling

of

of the glands ſubſiding, a ſimilar affection of the teſticles of men takes place, and of the breaſts in women—however no alteration in the mode of cure is required; for it has been obſerved, that to the ſame it yielded, nor were the parts, particularly the teſtes, ever known to ſuppurate.

Sometimes a hardneſs will remain in the parotid and maxillary glands; theſe yield to ſmall doſes of calomel, and gentle purging; ſometimes the application of the quickſilver ointment hath been neceſſary.

5. TONSILLARY MALIGNANT ULCEROUS SORE THROAT, (501.) OR MALIGNANT SCARLET FEVER.

This has often raged in England, and appears to be a quinſy, or ſore throat, of a more malignant nature, attended with a remittent fever, verging more to the putreſcent than inflammatory ſort; or running very rapidly from the former into the latter.

This diſeaſe oftener attacks, and with a greater degree of violence, infants and young children than adults; girls than boys; the infirm than thoſe in the vigour of health; thoſe of a pale, wan complexion, and relaxed habit, with an acrimonious ſtate of fluids, than the robuſt and ſanguineous; and appears particularly in autumn, preceded by a hot ſummer.

DESCRIPTION. In its commencement, it firſt ſeizes the patient with *chillneſs, languor, ſickneſs, and extreme oppreſſion at the pit of the ſtomach---great dejection of ſpirits---very ſudden weakneſs---great heavineſs on the breaſt---and faintneſs*---theſe are ſucceeded by *extreme heat,*

heat, nauſea, vomiting, with ſoreneſs of the throat---ſometimes the affection of the throat makes the firſt appearance---in general the *pulſe* is frequent, ſmall, and fluttering, though ſometimes depreſſed, and undulating---the *tongue* moiſt, eſpecially towards the root---the *eyes* heavy, reddiſh, and watery---the *countenance* frequently full, fluſhed, and bloated, though now and then pale and ſunk---the *breathing* quick and laborious---the *ſkin*, though extremely hot, not perfectly dry---the *urine* commonly pale, thin, and crude; in many adults, however, it will be made in ſmall quantities, high coloured, or turbid like whey---the *throat* ſore and inflamed, exhibiting a ſhining redneſs, of a deeper colour than in common inflammatory ſore throats, and having a puffy appearance which covered the tonſils, and ſpread over the fauces, the *tonſils* at the ſame time ulcerated, and in ſome degree, though not greatly, enlarged---a *delirium* ſometimes comes on in the day-time, the ſymptoms appearing ſlight; yet is there in the night a conſiderable increaſe of violence, and that through the whole courſe of the diſeaſe---the *ſwallowing* is difficult, and more ſo on ſwallowing the ſaliva only, than of any liquid or ſoft diet.

On the third day, or thereabouts, an efflorescence on the ſkin generally appears, but without any alleviation of the diſtreſſing ſymptoms; indeed, they frequently increaſe, and, added to them, there is often a *purging*—at this time the patient begins to *throw about his arms and legs*, lying in a ſtate of great inquietude; or he becomes *drowſy*—there now comes on *great proſtration of ſtrength---the conſtitutional powers fail---ſwal-*

lowing grows more difficult—the *breathing* more laborious—and before the ſixth day the patient expires in a ſtate of ſuffocation.

CAUSES. The *remote* and *inducing*, as in all diſeaſes ariſing from any ſpecific infection, or contagion, is a prediſpoſition in the habit to receive and feel the effects of the morbid matter, which we conceive to be of a peculiar nature capable of creating the diſeaſe, communicated from the air, or bodies before affected, which conſtitutes the *proximate* or *immediate* cauſe; for frequently the diſeaſe, either from the breath, or contaminated matter ſpit up, will attack the attendants, and a whole family—a ſtrong proof that the diſeaſe is infectious and contagious.

CHARACTERISTIC SIGNS. (See page 502.) And here it is of the utmoſt conſequence to diſtinguiſh this from the ſimply inflammatory ſore throat, which may be done by the looſeneſs and vomiting—the puffy and dark-coloured redneſs attending the ſwelling—from the fœtid ulcers of the throat, covered with a white ſlough—from the hoarſeneſs of the voice—the ſlight delirium coming on ſo ſoon—and from the ſudden and great proſtration of ſtrength—becauſe much depends upon the mode of cure firſt adopted—for what will be the means of laying a foundation of a cure in the ſimple inflammatory, would be the cauſe of death in the malignant quinſy.

The redneſs of the tumefied parts, brightneſs of the eyes, no great degrees of debility and fainting, the ſlough being white, and the florid appearance of the eruption on the ſkin, are favourable omens.

But

But if the debility ſhould be violent; if the ulcers are aſh-coloured, black, or livid; if there ſhould be a diarrhœa, rigor, weak and ſmall pulſe; the body put on a cadaverous appearance; the eyes loſe their ſplendour; the eruptions diſappear, or become livid; and particularly if the noſe bleeds—the worſt muſt be expected.

CURE. The indications of cure are ſimilar to thoſe of putrid fever, (349, &c.) to which we muſt add, the healing of the ulcers.

In the moſt malignant kind, little can be expected from our endeavours, the progreſs to diſſolution is ſo rapid.

In the more mild ſort, whatever may have been ſaid by men whoſe medical characters entitle them to attention, with reſpect to bleeding, nothing except the moſt diſtreſſing inflammatory ſymptoms, which rarely occur but at the commencement, can authoriſe the practice; for I have generally obſerved, that thoſe who have undergone the operation in this ſpecies of fever, ran very quickly into extreme danger, or died.

If, then, at the onſet, there appears to be ſtrong vaſcular action, ſaline mixtures, with ſlight antimonials, and acid gargles, ſlightly aſtringent, with occaſional gentle aperients, or emollient glyſters, if neceſſary, after the adminiſtration of a vomit, may be perſiſted in, till ſymptoms of putreſcency make their appearance, which will ſoon be the caſe—then we muſt rely on bliſtering under the throat, and antiſeptics, as bark, mineral acids, aceſcent drinks, and vinous cordials, for relief. See PUTRID FEVER,

FEVER, (349.) where we have treated on theſe remedies, except gargles, which may be made as directed No. 94.

Or the vehicle to the other ingredients may be pectoral decoction; the more antiſeptic ones may be made of decoctions of bark, with tincture of myrrh, red port, and the mineral acid—ſome adviſe a gargle made of honey, barley-water, and ſpirit of ſea ſalt—and after the fever has remitted, drying the ulcer with quick-lime ley mixed with honey.

CHAP. II.

INFLAMMATIONS OF THE BREAST.

§ 1. PLEURISY, OR INFLAMMATION OF THE PLEURA.

THIS is an affection of that membrane called PLEURA, from the Greek word *pleos*, plenus, full, which lines the inſide of the cheſt, covering the ribs internally, and intercoſtal muſcles (27.) and lungs, (19.) and forming the mediaſtinum and pericardium, (19.) attended with an acute fever, great pain, and difficulty of breathing.

It is divided into the TRUE PLEURISY, when the membrane itſelf is affected—into the SPURIOUS, when the intercoſtal muſcles;—and alſo into MOIST, when expectoration is an aſſociate; and DRY, when there is no ſuch appearance—indeed, at the onſet it puts on generally

generally the appearance of the latter, and of the former in its progreſs, if not conquered by reſolution; for then moſt commonly expectoration takes place.

DESCRIPTION. At the commencement, the patient is generally attacked with chillneſs and ſhivering, which are ſucceeded by heat, reſtleſſneſs, pain in the head and ſide, the laſt very acute and pungent, running to the back and collar-bone—difficulty of lying on the ſide affected, with a dry cough, increaſing the pain, which, after the third day, is attended with an expectoration of a thin, ſanious, and ſometimes bloody matter—the breathing is alſo very difficult and painful—the pulſe hard and tenſe—the blood, when drawn, firm in its texture, and covered with a coriaceous, or ſubſtance like buff-leather — the urine very high coloured—and all the ſymptoms of a peripneumony, which we ſhall hereafter deſcribe.

CAUSES. The *remote* or *inducing* are, obſtructed or impeded perſpiration—ſtrong exerciſe—cold, thick, heavy air admitted into the lungs—cold northerly winds—drinking of ardent ſpirits—cold water drank when the body is overheated. Sometimes it ſucceeds a quinſy, colic, and ſpaſmodic pains—ſuppreſſed evacuations—eruptions repelled, as the meazles and ſmall-pox, &c.—external injuries of the cheſt—and, in fine, whatever will create a ſtimulus on the lungs poſſeſſed of an inflammatory prediſpoſition.

The *proximate* or *immediate*, an inflammation of the pleura running along the exterior ſurface of the lungs, or that part covering the ribs; but moſt frequently of *both* affected at the ſame time.

CHARACTERISTIC SIGNS. A pungent pain of the ſide, attended with febrile affections, pain alſo in inſpiration particularly increaſed; a difficulty of lying down, for the moſt part on the ſide affected; and very painful cough—in the beginning dry, afterwards moiſt, and often bloody.

CURE. The indications are ſimilar to thoſe of inflammation of other parts—at the onſet, we muſt have recourſe to copious bleeding, and that repeated, if the ſymptoms continue urgent, according to the ſtrength of the patient—the blood ſhould be taken from a large orifice; and in ſtrong full habits, and young up-grown ſubjects, not leſs than fourteen or ſixteen ounces—above the part in pain cupping-glaſſes may be applied, and blood taken away by thoſe means—if the pain ſhould be relieved by the firſt bleeding for ſome hours; and, notwithſtanding *that*, the pain and oppreſſion return, the operation muſt be repeated, and about twelve ounces more blood taken away; and, indeed, ſhould the ſymptoms prove obſtinate, and return in the courſe of ten or twelve hours, we muſt have recourſe to the operation again, and apply a bliſter over the part affected, eſpecially if the inflammation appears to extend itſelf outwardly, or the pain has any great degree of ſeverity; for, indeed, our chief dependence reſts on bleeding and local bliſtering, to weaken the tone of the vaſcular ſyſtem, and ſubdue the violence of the action of the veſſels—after the firſt bleeding, and in the intermediate times, ſuch things ſhould be adminiſtered as will co-operate to promote theſe intentions—we muſt, therefore, have recourſe to ſuch things as are

diluting, relaxing, and emollient, with cooling and aperient diuretics—hence may the patient drink copiouſly of *pectoral decoction, bran or linſeed tea, almond milk, apple-water, lemonade*; in all which portions of nitre may be diſſolved; and the body ſhould be kept open with *cooling and relaxing glyſters*, (No. 25, 26.)—*a large ſponge dipped in warm vinegar* applied to the mouth and noſtrils is uſeful, as well as diluting drinks, that the vapors may be received with the air into the lungs, relax the pores of the pulmonary veſicles, promote exudation, and bring on expectoration, by unloading the diſtended blood-veſſels, and making them permeable---or, for this purpoſe, the *ſteams of warm water, or ſome emollient decoction*, might be received into the lungs by inhaling them from the ſpout of a large tea-pot; or by MUDGE's inhaler, contrived for that purpoſe.

Emollient fomentations, or *bags filled with boiled herbs*, might be applied over the parts—*oily medicines*, forming emulſions or linctus's, (No. 81 to 84.) might be taken internally occaſionally—and *nitre*, mixed *with a little camphor*, or *antimonials*—and *ſaline mixtures* given every two, three, or four hours.

In the beginning of this diſeaſe, there is little doubt but this, like other inflammations, may be carried off by reſolution; but if the power and ſtrength of the veſſels have been ſo weakened, or there has been a plentiful depoſition of morbid matter upon the lungs, which has changed the nature of the pulmonary fluids, we muſt then endeavour to promote, by all means, ex-

pectoration, as the only remaining means of ſaving the patient from extreme diſtreſs, or death.

For this purpoſe, added to what we have above delivered, as an attenuant, ſeneka or rattleſnake-root, (277.) is eſteemed a powerful one, and has in theſe caſes been attended with ſucceſs, given three or four times a day; it promotes perſpiration and expectoration; but when we find the latter is remiſs, expectorants muſt be had recourſe to, (No. 95.) four ſpoonfuls of which muſt be taken every third or fourth hour.

When people begin to expectorate, ſome authors forbid any farther uſe of the lancet; *but ſo long as the ſeverity of the ſymptoms go on to increaſe,* we may purſue it to a fourth or fifth time; nay, indeed, farther, according to the ſtrength, till we find them alleviated, and the patient perceives himſelf conſiderably relieved.

This alleviation will be perceptible on the fourth or fifth day, by the head being freer from uneaſineſs, the tongue more moiſt; the cough will be leſs troubleſome; the breathing not ſo difficult; the expectoration more eaſy; the matter leſs tinged with blood; and by ſome alleviation and freedom in the pulſe, which will beat more regularly, and with more quietude.

Under theſe circumſtances, we ſhould perſiſt in the uſe of diluents and expectorants, keeping the body open with gentle cathartics, ſuch as the electarium e caſſia, oil of caſtor, manna, Rochelle ſalt, &c. (263 to 265.) or by the uſe of emollient glyſters---deſiſting now from farther bleeding.

Though

Though the diſeaſe in a few days generally terminates favourably, if the expectoration continues free and copious, yet ſometimes it ſtops ſuddenly, and no other diſcharge ſucceeding, the breathing becomes difficult and laborious; we muſt then endeavour to renew the diſcharge, leſt the patient ſhould die ſuffocated, by *bleeding, inhaling warm ſteams into the lungs, the application of bliſters, and antimonials,* ſufficient to promote gentle vomiting.

As the mode of treatment muſt be ſimilar in the ſimple inflammation of the lungs, heart, mediaſtinum, pericardium, and diaphragm, (19. 21. 26.) we ſhall now only deſcribe them, to ſhew how they may be diſcovered---and, firſt,

§ 2. PERIPNEUMONY, ſo called from the Greek words *peri*, circum, about, and *pneuma*, pulmo, the lungs.

INFLAMMATION OF THE LUNGS.

DESCRIPTION. This begins with ſhivering or chillneſs, ſucceeded by heat---after which there comes on anxiety, debility, and reſtleſſneſs, watchings, and delirium---the blood drawn is ſimilar to that in a pleuriſy---beſides, there is a redneſs of the countenance and in the eyes---the tongue is white and dry---the reſpiration laborious, quick, and hot, attended with a *dull, not an acute* pain---the patient cannot lie on the ſide affected---there is a pain in the ſhoulder---dry cough at firſt, afterwards moiſt, and vomiting---the pulſe is full and ſoft---the urine high coloured, which, after ſtanding, ſometimes becomes turbid—at length the

mind is diſordered---the ſight fails---a kind of hiſſing noiſe attends the breathing---the pulſe rather creeps than beats---the extremities grow cold---partial ſweats break out in the ſuperior parts---and death cloſes the ſcene.

Now this complaint is obviouſly diſtinguiſhed from a pleuriſy, by the *breath being hot, the pain dull, not acute, and the pulſe alſo full and ſoft.*

CAUSES. The *remote* or *inducing*, (ſee 513.)---*Proximate* or *immediate*, inflammatory obſtructions of the terminations of thoſe arteries of lungs, (20.) called pulmonary and bronchial, either ſeparately or conjointly.

CHARACTERISTIC SIGNS. Febrile affections, attended with an obtuſe pain under the breaſt-bone, or betwixt the ſhoulders---anxiety, and difficulty of breathing---a cough, generally, though not always, moiſt---the face ſwelled, and of a purpliſh colour.

CURE. (See Pleuriſy, page 514.)---But here it may not be uſeleſs to obſerve, that there ſeems to be a material alteration between the termination of an inflammation of the pleura and that of the lungs---the ſolution *of the firſt* often happens by a plentiful ſweat, or a copious diſcharge of loaded urine---*of the laſt*, more frequently by expectoration---and in both caſes, when theſe evacuations of ſweat, urine, or expectoration have been perfect, a full and ſalutary criſis is formed, all the oppreſſive ſymptoms vaniſh gradually, and the re-eſtabliſhment of health happily ſucceeds.

The

The inflammation of the mediaſtinum, which is only a duplicature of the pleura, manifeſts itſelf by an acute pain in the middle of the breaſt, between the breaſt-bone and the ſpine, or clavicles or collar-bones, attended with frequent and quick breathing, and the reſt of the pleuritic ſymptoms.

The *inflammation of the heart, and the membrane ſurrounding the heart*, is accompanied with a deep-ſeated pain---weight---anxiety---very quick, and frequent reſpiration---great thirſt---a heat in the cheſt---palpitation of the heart---with a hard and unequal pulſe, and frequent fainting.

The ſame affection making the diaphragm, or that part of the pleura which covers it, (27.) *the ſeat*, has for its attendant ſymptoms, an acute fever—reſtleſſneſs—anxiety—and delirium—an acute pain between the ſpurious or ſhort ribs, and the vertebræ of the back placed oppoſite to them, agreeable to its ſituation—the breathing is quick and ſhort, accompanied with convulſive catchings in inſpiration---a dry cough and hiccough---the hypochondrium, or part below the ſhort ribs is drawn in towards the back, and the abdomen, or lower belly, has little or no motion during the action of breathing.

The three complaints we have now mentioned are called by ſyſtematic writers, CARDITIS, from *cardia*, cor, the heart---PERICARDITIS, from *peri*, circum, about, and *cardia*---and PARAPHRENITIS, in contradiſtinction to *phrenitis*, or the inflammation of the brain, becauſe, though a delirium always attends it, the brain is only ſympathetically affected in this caſe,

whilſt in the PHRENITIS it is the ſeat of the diſeaſe.

With reſpect to the cure, we muſt purſue the ſame plan as adviſed in pleuriſy, exerting our ſtrongeſt efforts to produce reſolution, the only ſalutary termination; for all the other either bring on immediate death, or lay the foundation for ſome irremediable complaint, of which we ſhall treat, as ſoon as we have taken notice of another ſpecies of the peripneumony; for in this place we have confined ourſelves to ſuch as were purely inflammatory.

MALIGNANT PERIPNEUMONY.

This complaint is by far more dangerous than that we have before deſcribed—as it generally attacks thoſe where humors are in an highly acrimonious ſtate, ſcorbutic habits, and ſailors after long voyages.

DESCRIPTION. In this complaint, the blood is in a diſſolved ſtate, livid, and when drawn has no coriaceous, or leather-like appearance upon its ſurface, as in the inflammatory ſpecies—there is alſo great reſtleſſneſs with extreme debility;—pains all over the body;—profuſe ſweats, and red, or livid eruptions, like flea-bites;—the patients are apt to faint on the leaſt motion, have a difficulty of breathing, and cough or ſpit up a thin, ſanious, bloody matter, which ſmells offenſively—the pulſe is ſoft, and depreſſed, and the urine very high coloured.

CURE. The fever attendant on this ſeems clearly to be of the putrid kind, and as ſuch muſt be treated—Bleeding, therefore, muſt be avoided, without

out at the beginning the pulſe ſhould be ſtrong, for otherwiſe it does great injury, particularly if it ſhould be repeated. Bliſters alſo are miſchievous.—Our chief dependence reſts upon *vegetable or mineral acids---camphorated vinegar*, (No. 55.) with a *nouriſhing and aceſcent diet---vinous liquids*, particularly ſuch as are aſtringent, the beſt of which are rheniſh, claret, and red port—*Opiates* alſo have been found ſerviceable in thickening and rendering more mild the thin, acrimonious humours depoſited upon the lungs; but then they ſhould be given with great caution, taking care not to increaſe the difficulties of breathing by their uſe.

Of the *ſpurious peripneumony* we ſhall take notice, when we come to treat on aſthma; and now proceed to treat on ſome of the conſequences of pleuritic and other inflammatory affections of the breaſt, forming different diſeaſes.

For when the pleuriſy, or peripneumony is not cured by reſolution, or expectoration, matter is generally formed within the cheſt, which, according to its ſituation, has received different appellations; when in the body of the lungs, though no more than an abſceſs, it is called VOMICA—from *vomo*, to vomit, becauſe they vomit forth, as it were, matter—when between the pleura, EMPYEMA, from *en* and *puon*, pus, matter.

I. VOMICA.

DESCRIPTION. Upon the formation of matter, which occurs, if the inflammation goes not off within fourteen days, there is an abatement of the ſeverity

verity of the ſymptoms — the pain ceaſes — and the pulſe, ſtill quick, is weaker and ſofter; yet the cough, difficulty of breathing, and oppreſſion ſtill continue — and if in this ſituation the patient feels a ſlight ſhivering, ſucceeded by heat, little doubt remains of an abſceſs taking place; — add to this, if the cough increaſes upon the leaſt motion, the patient cannot lie but on the ſide affected, and the ſymptoms daily grow more ſevere, accompanied with debility and emaciation, theſe appearances make it more certain. — And ſhould the vomica burſt ſuddenly, a ſuffocation may be dreaded — or ſhould the matter not find its way into the branches of the windpipe, ſo that it may be coughed up, and make its exit out of the habit, all hopes of ſucceſs are at an end.

2. EMPYEMA.

DESCRIPTION. An increaſed difficulty of breathing upon the reclenſion of the breaſt, preceded by an unreſolved inflammation — inability to lie on the ſide unaffected; a ſenſe of weight above the diaphragm, and many ſymptoms common to a dropſy of the cheſt — becauſe the immediate cauſe is a quantity of matter lodged in the cavity of the thorax, or the matter may form a ſac in any of the membranes of the breaſt; though they commonly burſt, pour out their contents into the cavity of the cheſt, and by preſſing upon the diaphragm, or other parts, according to the poſition of the body, occaſion the ſymptoms before ſpecified.

CURE.

CURE. In both theſe caſes every proſpect of ſucceſs depends upon freeing the habit from the offenſive matter, which, ſhould we not be able to accompliſh, either the patient will die ſuffocated—or conſumptive. In an EMPYEMA there are no hopes, except making an aperture between the ribs into the cheſt, as low as poſſible, to avoid wounding the diaphragm.

In a VOMICA, if from the expectoration of matter we have reaſon to believe that it has burſt into the branches of the windpipe, and the matter be white, ſmooth, and free from any offenſive ſmell, and continue to be freely diſcharged; if all the oppreſſive ſymptoms from day to day abate, particularly the cough and laborious breathing, we muſt not deſpair of a recovery, which we muſt endeavour to promote by the uſe of expectorant balſamics conveying the ſteams of the æthereal ſpirit of vitriol—or STERNE's æther dropt into hot water, and inhaled into the lungs, in order to cleanſe and heal the ulcer.

Ground ivy, hyſſop, chervil tea, whey, ſweetened with honey, are proper drinks—all animal food and broths ſhould be avoided, and their place ſupplied with milk—rice, ſpinage, turnips, or any other diluent, cooling vegetables, properly prepared: theſe will keep the body cool, and diſpoſe the humours to be mild and ſoft—and proceed farther in the manner we have laid down in pulmonary conſumption.

Sometimes matter will be ſo ſituated by being locked up in a ſac, whoſe ſides are formed ſo thick, that the matter cannot be abſorbed into the habit, but communicating with the branches of the windpipe, be

from

from time to time expectorated—under this circumſtance men will live a long time, as I have in two inſtances known, where nothing was ever attempted but putting the patients on a milk diet.

Sometimes an adheſion will be formed between the membrane covering the outer ſurface of the lungs and the pleura which covers the inſide of the ribs, forming a cavity, and points itſelf outwardly; or manifeſts itſelf by a conſtant fixed pain in ſome particular part—under theſe circumſtances, when all hopes of a cure by expectoration, the vomicæ and ulcers have been conquered effectually by an aperture being made into the cyſt in which the matter was lodged. Caſes attending the ſucceſs of this practice, with the mode of management, may be found in Dr. BARRY's treatiſe on the three different digeſtions, and diſcharges of the human body, to which our reader is referred.

§ 3. PULMONARY CONSUMPTION,

called PHTHISIS PULMONALIS, from the Greek word *pthino* or *pthuo*, corrumpo, to corrupt.

This diſeaſe is a waſting away of the whole body, attended with a hectic fever, cough, and ſpitting up of matter, from an ulcer on the lungs.

Authors have divided them into different ſpecies; THE DRY, OR TUBERCULOUS CONSUMPTION;---THE MOIST, OR CATARRHAL---and THE SANGUINARY, from their attendant ſymptoms and cauſes; but by dividing this diſeaſe into two ſtages, and adverting to the cauſe, we ſhall, by a conciſe view, render it leſs perplexing; the

the FIRST, compriſing its ſtate of inflammation; the SECOND, of ſuppuration.

DESCRIPTION. The inflammatory ſtage begins with chillneſs, ſucceeded by heat, low ſpiritedneſs, and pain---ſhrillneſs of the voice, ſalt taſte in the mouth, and dry cough—there is generally an oppreſſion in the breaſt, eſpecially after motion—thirſt—a weight in that part of the lungs affected—loſs of appetite, and vomiting up ſometimes of the food ſoon after taking it—the pulſe is quick, ſoft, and ſmall; ſometimes full, and rather hard---and frequently a ſpitting and coughing up of frothy and florid blood—this forms the firſt ſpecies—and when blood is coughed up, the third, or ſanguinary: and this by ſome is conſidered as a conſumption in its incipient ſtate.

After ſome time, matter is expectorated of different colours, white, yellow, green, bloody, either without ſmell, or offenſive—the body begins to fall away, and grows cold even in ſummer---the hectic fever increaſes in the evening, and in the morning abates by diſſolving ſweats---there is a burning heat frequently in the palms of the hands---and in the day looſeneſſes come on, or the patient makes a larger quantity of water---ſometimes the tongue will be beſet with ſmall ulcers—and, after eating, the patient will have a fixed red colour in his cheeks—the fingers grow thin, though the ends are bulbous, and nails curve inwardly—the feet ſwell—the hair falls off—and pit of the ſtomach ſeems to be pulled inwards and upwards—all the functions grow languid—the body dry—and the eyes ſink deep within their cavities—at length, from general debility,

the

the unhappy patient pays the debt of nature, at the time when he is flattering himſelf with the hopes of a recovery.

CAUSES. The *remote* or *inducing* are, acrid materials ſeparated by the lungs, and, by their ſtimulus, exciting a cough---ſmall glandular tumors, called tubercles---fumes of arſenic, or other noxious materials, getting upon the lungs---moiſt air---ſpitting of blood ---a diminution or ſuppreſſion of evacuations to which the conſtitution is accuſtomed---inordinate paſſion---ſedentary mode of life---too luxurious living---extraneous bodies getting into the lungs---wounds---retropulſion of acrimonious humours---beſides, it is occaſioned very often by a variety of other diſeaſes; as ſcrophula, pox, ſmall-pox, meazles, ſcurvy, aſthma, pleuriſy, and peripneumonic diſeaſes; ſcarlet fever, and other continued and remittent fevers; beſides, it may by contagion be acquired; and is alſo hereditary.

The *proximate* or *immediate* is, *in the firſt ſtage*, an inflammatory ſtate of ſome portions of the lungs, particularly the glandular; *in the ſecond*, almoſt always ulcerations, which the opening of dead bodies who have died of this complaint verify; though ſometimes the cauſe has been found to be, an induration and ſwelling of the bronchial glands, which are diſperſed through the lungs, hard and black, not ſuppurated in the center, but running together, and firm, of the ſize of hazle-nuts or nutmegs, and oozing out a purulent mucus into the terminations and branches of the windpipe, not obſervable in the ſpits---ſome of them form earthy

earthy concretions, do not ſuppurate kindly, but remain in a ſtate of hardneſs, and, when cut, ooze out a thick purulent mucus, and thick black blood.

CURE. Now, whether we conſider them as different ſpecies, or as different ſtages of the ſame complaint, we muſt adapt our mode of cure accordingly---hence, then, IN THE FIRST STAGE, we muſt endeavour to conquer the inflammation, by gentle bleeding, renewed at proper intervals, and the applications of bliſters to the back and ſides, frequently repeated; we ſhould alſo give oleaginous and incraſſating demulcents, to ſheath the humours, and prevent the coughing---gentle vomits ſhould be, after proper evacuations, repeatedly had recourſe to, at leaſt every morning, by giving a few grains of ipecacoanha, white or blue vitriol; though the firſt is preferable---a courſe of goat's whey would be uſeful---living upon vegetable diet, and being extremely temperate---when the inflammation abates, gentle doſes of ſome deobſtruents; ſuch as ammoniacum, millipedes, myrrh, ammoniacal iron, &c. would be ſerviceable to ſome; to others Seltzer water; thoſe of Moffat, Harrowgate, Kilburn, Iſlington, to others; uſing at the ſame time riding exerciſe.

Small doſes of mercury have been thought efficacious in reſolving the tubercles after the inflammatory ſtage is over, of which quickſilver with chalk, by ſome, has been preferred to every other compoſition of that claſs; but, whatever of them are adminiſtered, ſhould be given in ſmall doſes, in proportion to their activity.

IN THE SECOND STAGE, the indications are, to diſcharge the offenſive matter from the conſtitution by expectoration; or any other mode agreeable to nature, permitting her always to point the way; heal the ulcerations, ſtrengthen the lungs, and give tone and firmneſs to the habit in general; for which purpoſes chalybeate waters, mineral acids, particularly elixir of vitriol, have been recommended; gentle exerciſe, eſpecially riding on horſeback; a clear, dry, warm air, and ſuch amuſements and company as will moderately exhilirate, not fatigue the ſpirits---venery, all painful mental affections, or too great ſolicitude about buſineſs, ſhould be avoided.

In order to clear the lungs, and produce freedom of expectoration, we adviſe gentle emetics, (527.) and ſailing, for theſe are greatly conducive towards giving ſtrength to the part affected --- the myrrh mixture, (No. 96.) has been in many caſes highly ſerviceable---and, in order to prevent the abſorption of matter from having any bad effect upon the blood, *antiſeptics*, not of the ſtimulating kind; and *demulcents*, with vegetable and mineral acids, ſhould be uſed, if the patient has no looſeneſs to forbid their adminiſtration---*bark* alſo in this point is beneficial---at the ſame time the patient ſhould be kept on all ſuch things as are cooling and nutritious, and what we comprehend under the term milk diet---and if neither riding exerciſe or ſailing can be procured, *ſwinging* in the open air muſt be ſubſtituted in their places.

Nothing is more neceſſary than an exact obſervance of regimen in point of diet in theſe conſumptive caſes;

but

but of this, and other particulars, we have before ſpoken when on hectic fever, to the cure of which we ſhall refer our reader, (406, &c.) and proceed to treat on ſome other ſpecies of conſumptions, which ariſe not from affections of the lungs, but from matter formed in ſome other of the viſcera, and theſe are called

TABES,

from the Latin word *tabeo*, to pine away.

DESCRIPTION. Emaciation of the whole body, attended with an hectic fever, loſs of ſtrength, without much cough or ſpitting of matter; and theſe are generally owing to formation of matter in ſome of the interior parts of the machine.

If it happens in the LIVER, it is known by pain extending itſelf up to the ſhoulders---a ſwelling, and pain on touching the region of the part affected---nauſea, vomiting, and looſeneſs---there is frequently a cough ---the ſkin has a ſallow or yellowiſh look---and the ſediment in the urine is either brown or yellow.

If in the STOMACH, it manifeſts itſelf by fœtid offenſive belchings—a cough without expectoration—a vomiting of purulent matter—fainting frequently—ſweats —and pain, either during the time of ſwallowing, or juſt after.

If in the INTESTINES, it is diſcoverable from the ſituation of the parts, and the ſeparation of matter by ſtool.

If in the MESENTERY, the ſigns are nearly ſimilar to thoſe which occur when in the liver, (ſee above,) though a hectic fever, joined to a tenſe ſwelling of the

belly, and a frequent diarrhœa, are diſtinguiſhing marks of this diſeaſe.

If in the KIDNEYS, there is a weight in the part affected, the patient lies on his belly, the urine has matter mixed with it, and there is a difficulty and pain in making water.

If of the WOMB, it is known by a pain of the loins, and a flow of matter externally through the vagina. (60.)

A tabes may alſo be occaſioned by matter being lodged in ſome parts more external, where an evacuation of pus may be procured by opening the abſceſs; which done, and the ulcer healed, the cure will be completed; but where this cannot be accompliſhed, as is generally the caſe in almoſt all of the impoſthumations we have ſpecified, we muſt attempt to correct the acrimonious ſtate of fluids brought on by the abſorption of matter, and guard the conſtitution againſt its effects, by the uſe of Peruvian bark, and ſuch a regimen as we have before laid down in caſes of conſumptions from ulcers of the lungs. (538.)

Sometimes, though there will be only a ſcirrhoſity, or hardneſs of the parts, particularly the liver and meſentery, ariſing from the veſſels being obſtructed; to the latter of which children about ſeven years old, without any ſigns of a ſcrophulous taint in the habit, born of common proſtitutes, are ſaid to be the moſt ſubject—they grow pale; ſpiritleſs; have a voracious appetite, ſometimes a depraved one, longing for things uncommon and improper to eat; with a relaxed ſtate of the inteſtines, and a looſeneſs, in which the food

taken

taken paſſes away almoſt in an unaltered ſtate, ſoon after eating; they fall away, are conſumed by a low lurking fever, and often fall into a dropſy of the belly, or a local inflammatory affection comes on, and cloſes the ſcene in death.

CURE; This, in all caſes of their kind, is to be attempted, by ſteel medicines, or waters, goat's whey, foſſile alkali, or ſoda, (Page 287.) or ſuch of the mineral waters as abound with them, joined to aſs' milk —deobſtruent gums, particularly myrrh, ammoniacum, with ſoap, and preparations of ſteel, rhubarb, and tartarized kali, may, when opening medicines are neceſſary, be given; and, with the uſe of theſe, a milk diet ſhould be perſiſted in, with great regularity.

Though we have ſaid that moſt of theſe conſumptions, not of the pulmonary kind, ariſe from formation of matter, or obſtructions, there is one which deduces its origin from another cauſe; and this is called

TABES DORSALIS, OR THE DORSAL CONSUMPTION,

from the Latin word *dorſum*, the back; which, beſides the common ſymptoms of a tabes, is to be diſtinguiſhed by others, as a conſtant diſcharge of mucus, or ſeed ſo called, through the urethra, with frequent nocturnal emiſſions—difficulty of making water—coſtiveneſs—pain and weakneſs in the ſmall of the back—violent and acute head-ach—with an uneaſy creeping ſenſation down the ſpine from the neck to the loins—difficulty of breathing, and wearineſs, with an heavineſs of the head, and ringing of the ears.

The general CAUSE of this complaint is, exceſs in libidinous indulgencies, which often ends fatally, as the unhappy victims are generally ſo weak as to perſiſt in them; and, without total abſtinence, the moſt judicious advice will be inefficacious.

CURE. This depends upon our attempts to invigorate the ſyſtem, and increaſe the ſtrength and activity of the ſolids, by a courſe of aſs' milk, ſteel waters, the cold bath, with bark, and elixir of vitriol---the patient living in a pure air, uſing gentle exerciſe, light, and moderately cordial diet, given in ſmall quantities, ſuch as will not be too great for the ſtrength of the digeſtive powers—theſe applied in time—and no diſeaſe requires more early application—before the hectic fever, and violent night ſweats come on, may give relief; but, after that period, there is little hope for ſucceſs.

§ 4. INFLAMMATION OF THE STOMACH, or GASTRITIS.

from the Greek word *gaſter*, ventriculus, the ſtomach; in which caſe the ſtomach is ſaid to be inflamed wholly, or only in part.

DESCRIPTION. In this complaint the GENERAL SYMPTOMS are, extreme anxiety---watchings---reſtleſſneſs—toſſing about of the body—fainting---with a *moſt acute fever*, ſoon accompanied with nervous and putrid febrile affections—the LOCAL; great thirſt—difficulty of breathing---*pain in the region of the ſtomach ---exceſſive heat, and a ſenſe of burning---continued painful vomiting---hiccough, and extreme pain from throwing up*

up of wind, and particularly after taking any ſharp acrid medicines---fullneſs and tenſion of the ſtomach---the pulſe rather hard, contracted, and frequent---with coldneſs of the extremities.

CAUSES. The *remote* or *inducing* are, a prevalent prediſpoſition in the ſtomach being preſent---bruiſes on the region of that organ, or wounds in the ſtomach itſelf---drinking of cold water, fermented liquors, ſtrong acrid emetics or purgatives, or other acrid medicines thrown into the ſtomach---corroſive poiſons---acrimonious humours generated in the blood, or repelled from the exterior parts of the machine, and thrown upon the coats of the ſtomach, ſuch as that of the ſmall-pox, miliary eruptions, gout, acrid bile, or any hard ſubſtances ſwallowed, and lodging in the ſtomach; or, in fine, any thing fixed there capable of producing ſtrong irritation---which naturally bring on the *proximate* or *immediate cauſe*, inflammation.

CHARACTERISTIC SIGNS. Theſe may be known from the Italics in the deſcription.

CURE. This will in many caſes depend upon adverting to the cauſes acting upon the ſtomach, and taking off that action; but if it ariſes only from thoſe which commonly induce inflammation, our chief dependence muſt be upon copious bleeding, fomentations, cupping upon the parts, and local bliſtering, and keeping the body open with emollient glyſters---very little can be expected from internal remedies, from the propenſity the ſtomach has to reject whatever is taken down---hence all we dare venture upon are demulcents, only moderately warm, ſuch as ſolutions

of gum arabic, tragacanth, or ſpermaceti, with nitre: to which may be added, a very ſmall portion of camphor, and three or four drops, now and then, of the tincture of opium---nitre may alſo be added to the glyſters, and thrown up freely into the bowels---flannels alſo, ſoaked in warm ſolution of nitre, may be applied as a fomentation.

But what we muſt moſt inſiſt upon muſt be bleeding ---nor muſt we be directed by the pulſe, as in this caſe it is apt to deceive us, for it is generally ſmall, quick, and irregular; ſometimes intermittent; the operation ſhould therefore be repeated till the pulſe riſes, and beats with ſome degree of freedom.

Indeed, if reſolution is not accompliſhed in the very beginning, mortification will very rapidly ſucceed.

Suppoſe POISON *ſhould be the cauſe*, at a very early period a quickly acting emetic ſhould be given, ſuch as white or blue vitriol, inſtantaneouſly, and afterwards large draughts of new milk, or freſh butter melted, and oil; theſe are extremely ſalutary; or any other ſheathing liquids, drank in ſuch quantity as to fill the whole alimentary canal, in order to guard the coats of the ſtomach and inteſtines from receiving any injury from the acrimony of the poiſonous ſtimulus---when even arſenic has been taken, theſe have been found efficacious.

Should the *poiſons be compounded* of any metalline ſubſtance joined with an acid, ſuppoſe corroſive ſublimate, before the inflammation comes on, alkaline ſalt diſſolved in water ſhould be freely adminiſtered; this will diſunite the compound, and render it inactive.

Admit

Admit it ſhould be occaſioned by any eruptions receding from, and thrown back into the habit from the ſurface, and fixing on the ſtomach, we ſhould apply bliſters, in order to recal to the ſkin the offending matter, by ſoliciting a more copious flow of humours there.

§ 5. Inflammation of the Intestines.

called ENTERITIS, from the Greek *enteron*, inteſtinum, inteſtine.

Perhaps there is not any complaint ſo commonly talked of as this; yet it certainly does not occur any thing like ſo often as is imagined—ſome ſpecies of the colic is frequently, I am perſuaded, miſtaken for it---practice warrants me in ſaying thus much.

DESCRIPTION. It generally proceeds in the following manner: after the body has been coſtive, there come on acute pain, and diſtenſion of the belly, particularly near the navel; the coſtiveneſs then becomes more obſtinate---the patient complains of ſickneſs, and throws wind upwards---then ſucceeds vomiting of the common contents of the ſtomach, afterwards of viſcid phlegm and bile---ſhould this continue, the fæces come up, nay, even the glyſters, by the mouth---there is much difficulty of breathing---an obſtruction of urine---the pulſe quick and ſmall---thirſt —and great debility—the pain at length ceaſing, faintings, hiccough, delirium, and convulſions, cloſe the ſcene in death, occaſioned by a mortification having taken place.

CAUSES. Thoſe which are *remote* or *inducing* are ſaid to be, ruptures in the groin—worms—ſtimulating medicines—poiſons—or too acrimonious bile—too long retention of fæces—unripe fruit—or any hard ſubſtances lodged in the inteſtines—an introſuſception, or running in of one of the bowels into the other, and there confined by ſome ſtricture---tumors or hard ſwellings in the inteſtines or neighbouring parts.

The *proximate* or *immediate*, what occurs in other local inflammations, attended with the natural motion of the bowels, called periſtaltic, inverted and turned upwards, ariſing from the bowels being obſtructed.

CHARACTERISTIC SIGNS. Great internal pain, and ſoreneſs about the navel, ſo that it can ſcarcely bear the touch, with a diſtenſion of the belly, accompanied with thirſt, heat, great proſtration of ſtrength, and a quick ſmall pulſe.

CURE. Whatever may be the cauſe, we muſt labour to bring about, as quickly as poſſible, reſolution, leſt mortification ſhould be the conſequence, which may in a very ſhort ſpace of time ſucceed.

The treatment recommended in the inflammation of the ſtomach will be here proper; though more reliance may be placed on internal remedies, which muſt be calculated to gain a paſſage through the bowels, check the vomiting, and ſubdue the inflammation.

To anſwer the firſt purpoſe, the mildeſt aperients ſhould be tried; if they avail not, thoſe which are ſtronger; and ſhould they be rejected, we may couple them with opiates; the doſes ſhould be ſmall, and often

ten repeated. (See No. 97 to 99.)—If liquids will not ſucceed, ſolids may ſupply their place, (No. 100, 101.)—or ſhould theſe not anſwer, in conjunction with them, *ſuppoſitories*, (No. 102.) and *irritating glyſters*, (No. 103.) or the uſe of tobacco, (237.) may be tried; or crude mercury may be taken, an ounce at a time, three or four times a day.

Should ſome acrimony be ſuſpected to be the cauſe, the purging antimonial mixture is recommended, (No. 104.) of which let three or four ſpoonfuls be taken every ſecond hour, till the patient vomits, and has a free paſſage downwards. Indeed, when every thing has been tried in vain, cold water thrown ſuddenly upon the feet, legs, thighs, and belly, laid bare, has ſucceeded.

If theſe remedies, added to the applications we have adviſed in inflammations of the ſtomach, do not anſwer our purpoſe, mortification will take place---and here we muſt be careful that we are not deceived; for people, for ten or twelve hours before their death, being freed from pain, flatter themſelves with the hopes of recovery, even when the fatal ſcene is commenced, and they die in a few hours---but if the *pulſe ſhould be low---the countenance become pale and ghaſtly---and cold clammy ſweats come on*, we may be certain of the dreadful event.

But, ſhould our efforts prove ſucceſsful, great care ſhould be taken to avoid a relapſe; for, unleſs the bowels have acquired proper ſtrength, the malady is apt to return.

The

The diet therefore ſhould be, for ſome time, of the lighteſt kind, and not flatulent---the patients ſhould be kept quiet, free from cold, and unruffled by mental inquietude--nothing crude and difficult of digeſtion ſhould be taken; nor ſhould they uſe much walking exerciſe, or any ſevere motion of the body.

§ 6. INFLAMMATION OF THE LIVER,

called HEPATITIS, from the Greek *hepar*, jecur, the liver.

The liver itſelf may be inflamed, ſtill manifeſt itſelf by different ſymptoms, which authors have thought neceſſary to ſpecify, in order to avoid any errors which might occur for want of ſuch proper diſtinction.

DESCRIPTION. If the inflammation happens *on the interior concave part of the liver*, it is diſcoverable by a fixed obtuſe pain, and weight in the right ſide under the ſhort ribs, attended with heat, uneaſineſs about the pit of the ſtomach—the pulſe on the attack being almoſt in its natural ſtate; though afterwards much quickened—there is in the right ſide alſo a diſtenſion—the patients loſe their appetite, are ſick, and troubled with vomiting—the tongue becomes rough and black—they complain of pain in the ſtomach, have a very troubleſome hiccough, and their countenance is either pale, of a citron colour, or yellow like thoſe in the jaundice.

If it is *on the ſuperior or convex part*, they feel an acute pain in breathing, extending either towards the throat or ſhoulder—the pulſe is quicker—they have a dry

dry cough—lie down with difficulty on the left ſide—are troubled with hiccough and vomiting, and grow extremely weak.

CAUSES. The *remote* or *inducing* are, too violent and repeated ſhocks from vomits—hard tumors of the liver—extremely tenacious blood—too great a load of fat in the omentum, or caul, (35.)—cold air, or cold liquids ſuddenly affecting the liver, at a time when it experiences too great a degree of heat.

Though ſome do not conſider the complaint as originating in the liver itſelf, but communicated from the parts which lie contiguous to it, being thus primarily affected—to all which we may add, amongſt the number of inducing cauſes, all ſuch as are common to other fevers of this kind.

CHARACTERISTIC SIGNS. A tenſion and pain in the right ſide under the ſpurious ribs, ſometimes pungent, like that of a pleuriſy; ſometimes more obtuſe, with a ſenſe of heat and weight—a pain at the collar-bone and top of the right ſhoulder—an uneaſineſs on lying down on the left ſide—a difficulty of breathing—dry cough—vomiting and hiccough—the face of a yellowiſh colour, accompanied with thirſt and a loathing of food.

CURE. This diſeaſe in our climate is conſidered as rather uncommon, though, if properly treated, it rarely becomes dangerous.

In this, as in other caſes of viſceral inflammation, we muſt have recourſe firſt to copious bleeding, nor wait to be led till it is indicated by the pulſe; after this, a bliſter ſhould be immediately applied over the part

part affected, where the pain is felt; the belly ſhould be fomented, the legs bathed in warm water, and emollient and attenuating glyſters frequently adminiſtered, (No. 25, 26.)—ſaline neutral mixtures, with antimonials, ſhould be given, to which ſhould be added as much rhubarb as will keep the body conſtantly ſoluble, (No. 8.) and when the pain and other inflammatory ſymptoms are perceptibly abated, mercurial purgatives, joined with antimonials, will be of the greateſt advantage. (See No. 105, 106.)

Theſe means, if early and judiciouſly applied, will generally conquer the inflammation---if not, an abſceſs or ſcirrhus is formed---the conſequences of which are very frequently incurable tabes, jaundice, and dropſy ---though there are ſometimes peculiar circumſtances by which the patient in caſes of abſceſs is preſerved--- ſhould the inflamed part of the liver form an adheſion with the membrane covering the inſide of the right hypochondrium, or part under the ſpurious ribs, ſo that the matter confined in a ſac is prevented from falling within the cavity of the belly, and puſhes outwardly, occaſioning a ſwelling which points to the ſeat of the abſceſs, an inciſion made into it, ſufficiently large to evacuate the whole of the matter, may ſave the life of the patient, (ſee page 524, &c.)---ſometimes the matter formed will be thrown out of the habit by the kidneys, ſometimes by the inteſtines; but from whatever cauſe matter is formed in this organ, we muſt wait for the operation of nature, and have recourſe to ſuch remedies as the circumſtances of the caſe will admit, labouring chiefly to ſupport the conſtitution in the manner we have

have before ſpecified, when treating of conſumptions from internal abſceſſes.

§ 7. Inflammation of the Spleen.

called SPLENITIS, from the Latin word *ſplen*, the ſpleen.

This, though a caſe which very rarely occurs, ſtill, in conſequence of certain fevers of the remittent and intermittent claſs, the ſpleen will frequently be loaded, and remain a long time in a hardened and indolent ſtate---however, when it does make its appearance, it puts on the following appearances:

DESCRIPTION. There is a pain, generally dull, and fixed in the left hypochondrium—alſo a weight, attended with a remittent fever—there is generally a protuberance on that ſide externally, attended with a throbbing pulſatile pain—the fever, for the moſt part, increaſes every fourth day---the feet and knees grow red---the noſe and ears ſometimes pale, attended with a difficulty of breathing.

CAUSES. Theſe are ſimilar to thoſe which induce the ſame affection of the liver, if we except the morbid defect of the omentum or caul.

CHARACTERISTIC SIGNS. Diſtenſion and pain of the left hypochondrium, increaſed on preſſures, without any ſymptoms of an inflammatory ſtate of the kidneys, attended with a remittent fever.

CURE. Similar to what we have delivered in caſes of inflammation of the liver.

But, without much previous diſtreſs or diſorder, an abſceſs will here ſometimes be formed; which, burſt-

ing ſuddenly, pours its contents amongſt the viſcera of the belly; and in a few days deſtroys the unhappy patient.

§ 8. Inflammation of the Kidneys, or Nephritis.

ſo called from the Greek *nephron*, ren, the kidneys.

DESCRIPTION. Thoſe who are ſeized with this complaint feel a heat and pain, and ſometimes have a redneſs in the region of the kidneys, attended with febrile affections---they complain of a numbneſs of the thigh and leg of that ſide in which the affected kidney is ſituated---they make water with difficulty, which is at firſt pale, afterwards high coloured---and complain of a painful uneaſineſs in ſitting down or ſtanding---they lie down with moſt eaſe on the ſide affected---they complain of coldneſs of the extremities---are ſick, and vomit, and breath with difficulty---at length, if reſolution takes not place, a ſuppuration or mortification ſucceeds.

This has not unfrequently been miſtaken for an inflammatory lumbago, or pain of the loins; but from which it is eaſily diſtinguiſhable; firſt, from the patient's being able to raiſe himſelf into an erect poſture; from being bent forwards without any remarkable pain, which in the lumbago is very ſevere; from the pain following the courſe of the ureters, (57.); from the difficulty of making water, and the urine being more changed, which is not the caſe in the lumbago.

CAUSES. The *remote* or *inducing* are, whatever cauſes an irritation in the kidneys, ſo that the blood is determined too freely and obſtructed there, ſuch as wounds

wounds and bruiſes---calculous concretions --- food which generate flatulencies in the bowel called colon, (45.)—heating diuretics—ſhaking in a carriage, or on horſeback—ſuppreſſed evacuations—fullneſs of blood —or any ſtrong ſpaſmodic contractions of the kidneys themſelves.

The *proximate* or *immediate* are ſimilar to what induce other local inflammations.

CHARACTERISTIC SIGNS. Pain in the region of the kidney, often purſuing the courſe of the ureters—frequently making water—the urine being either pale, thin, or of a very red colour—numbneſs of the thigh—retraction or pain of the teſticle of the ſame ſide, and vomiting

CURE. If it proceeds from common cauſes, ſuch as induce other local inflammations, the ſame mode muſt be purſued as has been repeatedly adviſed in the foregoing part of this work.

But ſuppurations are often formed here, which are diſcoverable, notwithſtanding the abatement of the pain, by a ſenſe of weight perceptible about the region of the loins, with hot and cold fits ſucceeding each other, and the urine, from being high coloured, without ſediment, becoming whitiſh and turbid—under this circumſtance people will live many years, from there being ſo free an exit for the matter out of the machine by the ureters—however, in ulcerated kidneys, goat's whey, balſam of copaiva, (P. 253.) Canada balſam, (P. 271.) and alſo foſſile alkaline waters are recommended—ſolutions of kali impregnated with fixable air, (P. 308.)—demulcents, (P. 290.)—the leaves

leaves of the bear's wortle berry, (P. 211.) in powder, have been highly recommended in theſe caſes; and, from experience I ſpeak, much may be done by its uſe.

But thoſe calculous concretions, called ſtone, or gravel, are the moſt frequent ſource of inflammation in the kidneys—this cauſe is diſcoverable by the pain increaſing, and being more acute from exerciſe, or riding in a carriage—being more violent at intervals—from the urine being ſometimes gravelly, bloody, or mucous—the numbneſs of the thigh—retraction of the teſticle on the ſide affected—pain following the courſe of the ureters—as well as nauſea and vomiting being more violent.—The indication of cure in this caſe is, not only to take off the inflammation, but to procure a paſſage for the offending materials, whether gravel or calculus, by relaxing the parts, that it may ſlip away, and be evacuated.

Here then, beſides bleeding, warm bathing is eſſentially neceſſary; fomentations; copious uſe of demulcents, (P. 290.) particularly the internal emollients, (P. 216.) oily emulſions and draughts, (No. 81. 98, 99.) emollient glyſters, with turpentine and opium, (No. 116. 121.) diluent mucilaginous liquids ſweetened with honey, as bran tea, linſeed tea, decoction of marſh-mallows, or that of barley, in which laſt is diſſolved gum arabic, or gum tragacanth.

Nitrous medicines joined with the ſame gums may be adminiſtered, and opiates in ſmall doſes.

By theſe means the ureters will be relaxed, and ſheathed, for the eaſy and quick paſſage of the calculus,

lus, or gravel, into the bladder—beſides, the irritation on the parts will be leſſened, as they will become leſs ſuſceptible of the ſtimulus.

Should the ſtone be ſmall enough to paſs into the bladder, and be evacuated, the complaint ceaſes—if not, a different one commences, which we ſhall treat of hereafter.

§ 9. Inflammation of the Bladder, or Cystitis.

from the Greek word *kuſtis*, veſica, the bladder.

DESCRIPTION. In this complaint the patient experiences *a pain and tumor of the lower part of the belly---a frequent deſire, and difficulty in making water*---ſometimes *a ſuppreſſion of urine---and frequent efforts to go to ſtool*, attended with *febrile affections*---to which we may add, the pain on touching is intolerable—watchings, thirſt, and delirium, with coldneſs of the extremities come on—and, by retention of the urine, an increaſed hardneſs of the tumor.

CAUSES. The *remote* and *inducing* are, urinous acrimony concurring with fullneſs of blood—an acrid ſtate of fluids—inflammation of the urethra, from venereal ulcers, or acrid injections—inflammation of the rectum—ſuppreſſed piles—taking Spaniſh flies in too large quantities—in which, beſides the difficulty of making water, or ſevere ſtrangury, bloody urine will be voided, and a priapiſm occaſioned, ſometimes bringing on convulſions—or it may originate from blows—bruiſes—compreſſion—hard riding--or, indeed, from the ſtimulus of a ſtone in the bladder.

CURE. From whatever cauſe it proceeds, it muſt be cured, conſiſtently with the plan laid down in inflammation of the kidneys—only, in this caſe, greater benefit may be derived from fomentations and vapour applied to the parts affected.

There are alſo inflammations of ſome other parts of the lower belly, as the peritoneum, that membrane lining the lower belly as the pleura does the cheſt—omentum, or caul, (P. 35.)—meſentery, (P. 50.)—which, as they all of them require the ſame mode of treatment, we ſhall particularize only thoſe ſymptoms by which they are ſaid to be diſtinguiſhable.

THE INFLAMMATION OF THE PERITONEUM, OR PERITONITIS,

ſo called from peritoneum—is diſcoverable by a pain of the lower belly, which is increaſed by the body being in an erect poſture, attended with fever; though not accompanied with ſigns peculiar to other abdominal inflammations.

INFLAMMATION OF THE OMENTUM, OR CAUL, NAMED OMENTITIS.

This is diſtinguiſhed by an acute darting pain, perceptible, through the ſuperior and middle part of the lower belly, below the ſkin, muſcles, and membrane of the abdomen, increaſed upon preſſure, with ſwelling and tenſion, accompanied by an inflammatory fever.

INFLAMMATION OF THE MESENTERY, OR MESENTERITIS.

In this there is a tumor and deep-ſeated pain in the region of the navel, or thereabouts—the habit is altogether coſtive, or nearly ſo—from the adminiſtration of glyſters, after the firſt, not any thing is evacuated—the fever is ſometimes ſlight, ſometimes remittent, at others violent—the urine high coloured—there is a bitter taſte in the mouth—loſs of appetite, thirſt, and watchings come on—afterwards a thin, red, fœtid, or white matter paſſes off by ſtool.

THE MUSCLES OF THE LOWER BELLY WILL BE SOMETIMES INFLAMED, and from thence the liver compreſſed—which phyſicians have ſometimes miſtaken for an inflammation of the liver—but which is eaſily diſcoverable, from touching the ſkin, pulſation of the tumor, and circumſcribed figure, extending itſelf beyond the limits of the liver, and above the ribs—from the abſence of cough, difficulty of breathing, vomiting, and hiccough—matter here forming between the muſcle of the abdomen and the membrane which lines the inſide of that cavity, has been miſtaken for an affection of the liver itſelf—therefore neceſſary to be ſpecified.

CURE. In all theſe caſes we muſt have recourſe to the ſame methods as have been repeatedly pointed out in local inflammations, to prevent ſuppuration—which, if we cannot effect, a tabes will be the conſequence, particularly in the three firſt mentioned—but we muſt here obſerve, that in caſes of INFLAMMATION OF THE PERITONEUM, OR THAT OF THE MUSCLES OF THE ABDOMEN,

DOMEN, we muſt depend much on fomentations—applying after each operation, volatile liniment, with tincture of opium, (No. 107.)—and ſhould not theſe ſucceed, bliſters—which in the others may be uſeful—and *in all*, repeated glyſters; for theſe act alſo as fomentations, and in moſt apply cloſer to the part affected.

SECTION XIV.

ON DISEASES WHERE PAIN IS THE CHARACTERISTIC SYMPTOM.

WE conſider pain as ariſing from four different cauſes, either from nervous incitability, (P. 18.) vaſcular or muſcular irritability, (P. 18.) diſtenſion, or ſpaſm, creating ſtimulus; and when it is ſo oppreſſive as to become the moſt violent ſymptom, being of long duration, or frequently returning, it conſtitutes diſeaſes of this claſs—which take their names either from the cauſe known, or ſuppoſed to be the agent, or from the ſeat of the affection.—Yet we mean not here to include all diſeaſes which have pain for their aſſociate, becauſe it is attendant on all inflammations, ſettled fevers, remarkable evacuations, and evident ſpaſms; but confine ourſelves to thoſe diſeaſes where pain is the predominant ſymptom, unaccompanied primarily with any of the above-mentioned diſorders.

CHAP.

CHAP. I.

§ 1. HEAD-ACH.

IN this complaint, it will be ſufficient to enumerate the cauſes; becauſe it requires not any particular deſcription; and, according to the cauſe, to that is the cure adapted—but firſt we muſt obſerve, that it has been divided into three ſpecies; the two firſt agreeable o the nature of the affection; the laſt to its ſeat.

If there is a heavineſs and uneaſy dull ſenſation, occaſioning a pain in the head, as if it was too full, internally diſtended, and overloaded, it is denominated CEPHALALGIA, from *kephalos*, caput, the head, and *algos*, dolor, pain;—and, by way of diſtinction, CEPHALÆA, if the whole head ſhould not only be affected, but the pain be acute and violent, having ſevere exacerbations, or increaſe of ſeverity on ſlight occaſions, with ſpaſmodic tenſion, and ſoreneſs of the integuments.

And ſhould the pain attack either ſide of the head, chiefly at the temples, forehead near the eyes, and that ſhould be violent, and often periodical, it is called HEMICRANIA, from *emiſus*, dimidium, half, and *kranon*, caput the head.

CAUSES. 1ſt, A too great fullneſs of blood—2d, ſuppreſſion or retroceſſion of the menſes or piles—3d, morbid particles occaſioning intermittents—4th, from a load on the ſtomach, and indigeſtion—5th, different

ſpecies of acrimony; as that of the pox, gout, rheumatiſm—6th, hyſteric ſpaſms—and, 7th, from latent cauſes undiſcoverable, or irremediable when known—to each of which in our mode of cure we muſt particularly advert.

If it deduces its origin from the FIRST—a full ſlow pulſe—florid countenance; though oftener pale—load and heavineſs of the head, particularly of the fore part, immediately after riſing in the morning, or ſtooping to the ground—a difficulty of thinking, of diſtinctly reaſoning, and defect of memory, diſtinguiſh this.

Bleeding and purgatives will generally afford relief; if not, cupping at the nape of the neck, or back part of the head, may be had recourſe to.

If from the SECOND, bleeding during the fit will be neceſſary, and attempting to reproduce the periodic diſcharge, and ſolicit the renewal of the piles—bleeding in the feet in the former, and at the anus with leeches in the latter, may be attended with agreeable conſequences.

If from the THIRD, and it puts on intermittent appearances, bark alone, or coupled with valerian, (229. 300, 301.) (No. 32.) becomes efficacious, and giving emetics, (No. 11, 12. 38.) at proper intervals.

If from the FOURTH, it will be attended with throwing up of wind—nauſea—load and pain in the ſtomach—a bad taſte in the mouth—and vomiting; though this laſt will alſo attend both cephalalgia and hemicrania, (549.) without the origin of theſe diſeaſes being in the ſtomach, but in the head only; hence we ſhould be careful in making this proper diſtinction.

Therefore,

Therefore, if it is owing to the ſtomach, we muſt apply to emetics, (No. 11, 12. 38.) ſhould not any thing in the conſtitution prohibit their uſe; and afterwards to purgatives; taking care previouſly, if neceſſary, to empty the veſſels of the head by bleeding; afterwards bitters and chalybeates, (No. 61 to 65.) to ſtrengthen the ſtomach—we muſt alſo aſſiduouſly prevent coſtiveneſs, with proper aperients taken occaſionally. (No. 66. 108, 109.)

If from the FIFTH, we muſt proceed to attack the diſeaſes from whence they originate, as under theſe circumſtances they are only conſidered ſymptomatic.

If from the SIXTH, or thoſe called nervous headaches, penetrating, volatile, antiſpaſmodic ſubſtances, externally and locally applied, ſuch as WARD'S eſſence, æther, compound ſpirit of ammonia, camphor, will ſometimes give immediate relief—plaiſters alſo made of opium, applied to the part affected, in periodic partial affections of the head, I have known efficacious.

If from the SEVENTH, we ſhall be convinced how impoſſible the cauſes are to be diſcovered, and how little is to be done, if we only mention what has appeared on diſſection of thoſe who have laboured under this complaint.

In ſome the *ſutures of the ſcull* were ſo cloſely and firmly conjoined, that no traces of the junction of the bones of the cranium were to be found—in ſome *the dura mater*, (16.) was thickened and indurated, and in others it held earthy concretions—the *ſcull*, in ſome, *ſent out little proceſſes*, like thorns, running through the

membranes into the brain—and, in others, *crude quick-ſilver* was found in the ventricles of the brain, (17.) at the baſis of the ſcull.

Some periodic head-aches, from ſuch latent cauſes, will continue for a long ſeries of years, without any fatal effects; whilſt others, if they are conſtant and violent, terminate in apoplexies, ſome kinds of bad fevers, or ſpaſmodic diſeaſes.

Some general rules, however, are neceſſary to be obſerved, whatever may be the preciſe nature of the affection.

Patients ſubject to theſe complaints ſhould always keep their hands, arms, legs, and feet warm, particularly their legs, and have them well rubbed at bed-time—avoid coſtiveneſs---eat very light ſuppers---lie with their heads high, and in their night-caps---their food ſhould be always light, and eaſy of digeſtion---their exerciſe moderate---and their minds kept in a ſtate of cheerful eaſe.

§ 2. EAR-ACH, OR OTALGIA,

from *ous*, auris, the ear, and *algos*, dolor, pain.

We have before ſpoken of the inflammation of the ear, § 2. *in inflammatory complaints*; but there are other cauſes which induce this complaint; as, 1ſt, *worms*, ſuppoſed to ariſe from the eggs of the fleſh-fly depoſited in the wax, which form for them a neſt---2d, *a defluxion of humours*---3d, *from hard bodies puſhed into the ear*.

In the *firſt* inſtance, ſmoke of tobacco poured into the ear, and afterwards warm oil, prove efficacious.

In

In the *ſecond*, the ſymptoms are not violent—there are pain and ſwelling in the vicinity of the ear—running at the noſe—cough—but oftener a ſoreneſs of the throat—frequent ſounds and ringing of the ears—with painful ſenſations from thoſe which come externally.

This complaint is apt to be occaſioned by cold itſelf, or moiſt cold winds ſtriking the ears and head, expoſed to them without covering.

Local bleeding behind the ears with leeches, and bliſtering there, or the back part of the head, and, at the ſame time, the liniment, (No. 110.) may be dropt into the ear; ſedative fomentations, (No. 111.) are uſeful, with ſedatives and diaphoretics, (No. 4 to 10.) given internally.

In the THIRD, the bodies muſt be extracted in the gentleſt manner. We have an account of acute pains, attended with other melancholy circumſtances, by FABRICIUS HILDANUS, occaſioned by a ball of glaſs falling into the ear, and continuing for eight years, cured by extraction.

And we are alſo told, that ſome ſurgeons, miſtaking a ſwelling of the bony part of the ear for ſome extraneous body, deſtroyed the patient, by the violence exerted for its extraction.

Theſe caſes ſhew the neceſſity of caution and circumſpection, even in caſes conſidered in themſelves as trivial.

§ 3. TOOTH-

§ 3. Tooth-ach, or Odontalgia,

from *odous*, dens, a tooth, and *algos*, dolor, pain.

This complaint is known by a throbbing, gnawing, darting, or ſome other ſpecies of pain in the teeth, attended with watchings; ſometimes with a ſwelling of the cheek, great diſcharges of ſaliva from the mouth, &c.

Its ſeat is ſuppoſed to be the nerve creeping over the internal, ſometimes the external, membranous covering of the tooth.

CAUSES. 1ſt, Caries, or decay of the tooth or teeth affected—2d, an acrid defluxion, or flux of acrimonious humours, as of the ſcurvy, rheumatiſm, gout, from the obſtructed perſpiration—3d, nervous or hyſteric affections—and, 4th, pregnancy.

If it ariſes from the FIRST cauſe, it is generally perceptible to the ſight—the caries though ſometimes lurks between the teeth—ſometimes begins internally, ſometimes externally—however, when it is not perceptible to the eye, it may be diſcovered by the tooth being almoſt pellucid like pearl—or by the ſhock of ſome metallic inſtrument, which increaſes, or renews the pain—by a fœtid breath—a ſharp darting pain from cold water, or cold air received into the mouth—from a gnawing pain—from the obſtinacy of the diſeaſe, without any conſiderable tumor of the gums—from fiſtulous ulcerous gums, having a ſmall circular tumour round the orifice, and a purulent diſcharge—from rotten teeth, ulcerations have been formed,

formed, and ſwelling on the chin, and about the cheeks, which are never cured without drawing the tooth.

CURE. Drawing is the firſt remedy—though, if at the beginning a ſmall ſpeck or portion ſhould be perceived diſcoloured, that ſhould be immediately taken off, by which its progreſs would be ſtopped—applying oil of vitriol to the part affected, or muriatic acid, and neutralizing it with kali prepared, and then filling the hollow tooth with lead, or gum maſtich, has been ſucceſsful—a pill of opium and camphor, or of opium and calcined quickſilver—burning the part affected with a hot iron—cauterizing the ear—applying oil of cloves or cinnamon with lint to the rotten cavity, have been recommended; if this diſeaſe returns from ſlight cauſes, and many of the teeth are in a ſtate of decay, experience approves of waſhing the mouth every morning with warm urine—though indelicate, the remedy has its advocates—perhaps, uſing in the ſame manner lavender-water, ſpirits of wine, or brandy, properly diluted, may be conſidered as good a preſervative.

If from the SECOND, it may be diſcovered by the teeth being in a ſound ſtate—by the pain not confined to one or two teeth, but the whole jaw of that ſide being affected; and by the ſwelling of the gums, attended moſt commonly with a copious diſcharge of ſaliva.

CURE. The gums in the beginning ſhould be ſcarified, or leeches applied; alſo muſtard plaiſters behind the ears, long enough to occaſion a redneſs—or, in more obſtinate caſes, bliſters—the mouth ſhould be waſhed with warm milk and water—and internally,

diaphoretics, coupled with ſedatives, (No. 4 to 10) ſhould be given; ſmoaking tobacco, chewing pellitory of Spain, ginger, ſweet reed, pepper, &c. to cauſe a flux of ſaliva; applications of warm reſinous plaiſters, (No. 112.) with opium to the temples ſhould be adminiſtered; flannels impregnated with the fumes of frankincenſe, amber, ſugar, &c. applied warm to the cheek, and the mouth waſhed with ſpirits of wine and camphor.

If by theſe means the diſeaſe is not conquered, which generally happens to be the caſe, but the pains perſiſt, and the gums increaſe to ſwell, an abſceſs will be moſt likely the conſequence; under theſe circumſtances a roaſted fig ſhould be kept upon the part to promote ſuppuration, which once accompliſhed, muſt at a proper time be opened, cleanſed, and healed, by the applications of pledgets, dipped in a mixture of honey of roſes and tincture of myrrh.

If from a defluxion of any ſpecific humour, we muſt proceed as in the ear-ach, (553.) from ſimilar cauſes, making uſe of thoſe applications calculated to alleviate the local affections.

If from the THIRD, it generally yields to a courſe of antiſpaſmodic and ſedative medicines, ſuch as we find adviſed in hyſteric affections.

If from the FOURTH, there is no remedy, particularly in habits full of blood, ſo efficacious as bleeding.

§ 4. PAINS IN THE SIDE, OR PLEURODYNES,

from the Greek words *pleuron*, pleura, and *odune*, dolor, pain.

DE

DESCRIPTION. This diſeaſe conſiſts of pungent pain affecting the cheſt on one ſide, attended with difficulty of breathing, but without any acute fever, by which it is diſtinguiſhed from pleuriſy.

CAUSES. 1ſt, Too great fullneſs—2d, worms—3d, ſpaſms—4th, adheſions—and 5th, flatulence; to the cure of which muſt our remedies be adapted.

If it ariſes from the FIRST, it may be diſcovered by the pain not being deeply ſeated, but affecting only the intercoſtal muſcles, (P. 27.) the difficulty of breathing unattended with oppreſſion; though accompanied with a cough, ſtill the pulſe is unaltered, nor is there any febrile heat; it generally originates from catching cold, or an obſtruction of the menſes.

CURE. This Nature often performs by a return of the menſes, and indeed it will in healthful habits precede their appearance.

If from the FIRST, thin ſpare diet, gentle diaphoretics, (No. 1. 6 to 10.) and bleeding, are highly ſerviceable; volatile liniments, (No. 107.) muſtard plaiſters; warm flannels impregnated with aromatics, or warm water; bags of hot ſalt, or bladders, applied to the ſide, will expedite the cure—but ſhould they fail, local bleeding, by cupping, and bliſters to the part affected, we muſt call in aid.

If from the SECOND, there generally attends an erratic fever, but not of the inflammatory claſs—with a dry cough, pleuritic pain of the ſide; and worms are ſometimes evacuated—in the breath there is a particular offenſive ſmell—but theſe happen chiefly in infants.

CURE.

CURE. Though one bleeding may be ſometimes neceſſary, if the fever runs high, to abate its violence, yet the chief dependence is on cathartics, (P. 264, 265, 266.) emetics, (No. 11, 12. 38.) and vermifuges, (306.)—the purgatives though ſhould be of the milder claſs.

If from the THIRD, it generally proceeds from ſevere exerciſe, or ſtrains; and is muſcular—for pains in the breaſt from ſuch cauſes are attended with ſuch ſenſibility of the part affected, that it cannot bear the touch, and feels as if the part had been bruiſed.—This though is ſeldom attended with a cough.

CURE. Bleeding—with emollient fomentations, (No. 111.) oily liniments, (No. 107.) and gentle purging, (No. 3. 19 to 24.)

If from the FOURTH, as it proceeds from the lungs adhering to the pleura, occaſioned by preceding inflammation, it is often attended with a dry cough; ſometimes with bloody ſpits; febrile affections coming on after eating, without ſweating; but with difficulty and ſhortneſs of breathing; great uneaſineſs in lying on the ſide affected, and pleuritic blood.

CURE. The cauſe is irremediable, alleviation of the oppreſſive ſymptoms is all for which we can hope, —and this muſt be attended by bleeding, diluting drinks, oily emulſions, or linctuſes, (No. 81 to 84.) emollient decoctions, (216.) gentle ſedatives and diaphoretics, (No. 4 to 10.) nitrous medicines, (No. 2.) and a thin, ſpare diet—and all ſuch remedies as take off fulneſs from the veſſels, and render the circulating fluids thin.

If from the FIFTH, the pain in the ſide is ſudden, and acute, ſoon vaniſhes, and reſembles the cramp; though ſometimes it will be ſo violent for ſome minutes as to become intolerable; the pulſe is ſmall and ſlow; there is no cough; but the pain is ſo troubleſome that it impedes the breathing. This moſt commonly ariſes from cold, and chiefly affects the emlancholy, hypochondriacal, and thoſe who devote themſelves to ſtud .

CURE. Warm flannels, bladders filled with warm water, or bags with hot ſalt generally remove the complaint; and it will now and then be neceſſary to give ſome nervous tincture, (228, 229.)

But theſe pains, or ſtitches, have generally indigeſtion for their cauſe; therefore, to prevent their return, we muſt proceed in the ſame manner as we adviſe for aſſiſting the digeſtive organs in preſerving their functions, ſee Dyſpepſy, and increaſing their power; in order to prevent an accumulation of offenſive matter in the firſt paſſages; or crude chyle from being thrown into the maſs of circulating fluids.

If pains of the ſide ſhould ariſe from the action of any ſpecific acrimony—we muſt proceed as before directed, (566.)

§ 5. PAINS OF THE STOMACH, CALLED GASTRODYNIA.

from *gaſter*, ventriculus, the ſtomach, and *odune*, dolor, pain.

Theſe, according to the peculiarity of the affections, have been differently denominated.

When

When there is an acute and conſtant pain in the region of the ſtomach, unattended with fainting, as in the CARDIALGIA, or fever as in the GASTRITIS, (532.) often attended with a ſwelling in the ſtomach, it is called GASTRODYNIA.

When there is an uneaſy ſenſation belonging to the ſtomach, or epigaſtric region, attended with a degree of faintneſs, as if a ſwooning would come on, CARDIALGIA, from *cardia*, os ventriculi, the mouth of the ſtomach, and *algos*, dolor, pain—for this is ſuppoſed to be an affection of the upper orifice of the ſtomach.

When the principal ſymptom is a ſenſe of heat in the ſtomach and gullet, which ſometimes ariſes into the fauces, unattended with any acute fever, PYROSIS, *heart-burn*, from *pur*, ignis, fire, or its effect, heat.

However, we think in a practical view, they may all come under one head, particularly as the modes of treatment depend upon the ſpecific cauſes from whence they proceed—we ſhould ſay therefore,

PAIN OF THE STOMACH, OR GASTRODYNIA, is diſcoverable by an acute and conſtant pain, unattended with any febrile affections—ſometimes aſſociated with a propenſity to faintings, at others with a ſenſe of heat there, and in the gullet ariſing now and then to the fauces—then called *heart-burn*, and not unfrequently with a conſiderable diſcharge of ſaliva from the mouth—then ſtyled WATER BRASH, or BLACK WATER.

CAUSES. 1ſt, Foulneſs from indigeſtion—2d, flatulence—3d, bile—4th, poiſons--5th, hard ſubſtances taken into the ſtomach—6th, inflexion of the lower part

of

of the breaſt-bone, (called xyphoid, or enſiform cartilage, from its being pointed like a ſword)—7th, gout, worms—8th, debility, ulcers, or excoriations.

CURE. From conſidering the cauſes in the firſt five, the indications are very nearly ſimilar, except in the flatulent, to evacuate the contents, and ſo to invigorate the ſtomach and inteſtines, that digeſtion not only may be properly promoted, but the remains, or what is indigeſtible, may be carried out of the machine regularly by the increaſed power of the inteſtines.

If, therefore, it ariſes from foulneſs of the ſtomach occaſioned by indigeſtion, which paſſes not off ſoon by vomiting, or purging, but continues, the orifices of the ſtomach will be contracted, and preſſing upon its contents, occaſion ſevere pain, with a ſenſe of weight, reſtraining free reſpiration; ſometimes the pulſe will be hard and quick; at others depreſſed, and ſlow—this will be the caſe where the complaint is recent, and proceeds merely from indigeſtion, and matter which the ſtomach contains being in a crude ſtate only; but if it is *viſcid, acrid, bilious, putrid,* or *rancid,* there will be a diſagreeable taſte on the palate—foul tongue—unpleaſant eructations, added to the uneaſineſs at the ſtomach, nauſea, and load in the region above the navel, with a loſs of appetite; beſides, if the matter is acrid, there will be a heat in the ſtomach, the nature of which will be denoted by a taſte in the mouth if any thing is thrown up, whether *acid, ſalt, bitter, rancid,* or *oily*; —in caſes where the matter is *merely viſcid,* there is a kind of watery inſipid taſte in the mouth only.

Which ever of theſe cauſes are prevalent, if the habit is coſtive, I clear the firſt paſſages with ſome opening medicine, (No. 108, 109.)

Afterwards waſh the ſtomach well with warm water and oil—chamomile flower tea drank plentifully—or ſtimulate the top of the gullet with a feather, or preſcribe an emetic, (No. 11, 12, 38.)—if great expedition is requiſite, a few grains of white or blue vitriol, (No. 259.) ſhould the cauſe be mere load from indigeſtion; theſe will be ſufficient, giving for a little time a few drops of elixir of vitriol in cinnamon tea twice a day; but ſhould this circumſtance often occur, from the debility of the coats of the ſtomach, I have recourſe to bitter ſtimulants and chalybeates, (No. 61 to 65.) and recommend riding exerciſe, or ſailing—alſo the uſe of ſome chalybeate water, particularly thoſe of Bath, which contribute much to invigorate the tone of the ſtomach—but ſhould the offending cauſe conſiſt in the quality of the offending matter, ſuch things muſt be preſcribed as counteract their properties.

If it is of an *acid nature*, magneſia, abſorbent earths, alkalines, or thoſe medicines termed antacids, may be applied to (296.)—if *acrid*, the ſtomach ſhould be well waſhed with weak chicken broth, or warm water alone; then gentle aperients ſhould be given, (No. 3. 22 to 24.) and occaſionally perſiſted in.

If merely *viſcid*, ſaponaceous medicines, (No. 109) are uſeful.

If rancid, or putrid, the antalkalines, particularly the mineral acids, (294, 295.)

And in all theſe caſes the ſtomach ſhould be invigorated with ſtimulant bitters, &c. adviſed (562.) and ſuch mode of living preſcribed as will prevent the generation of theſe offenſive materials; avoiding ſuch viands as are apt to turn acid, alkaline, viſcid, or rancid; and perhaps the only thing we can depend upon for completing the cure, is a courſe of ſuch mineral waters as upon trial beſt ſuit the conſtitution, which can only from experiment be aſcertained.

If the complaint ariſes from flatulence, it is cauſed by wind diſtending the ſtomach, and throwing its orifices into a contracted ſtate, hence there is a violent tenſive pain at the pit of the ſtomach, with difficulty of breathing;—the pulſe grows ſmall and depreſſed—the extremities are cold, with great anxiety—and the body is often ſolicited to bend forwards, to promote the emiſſion of wind; which always brings ſome alleviation—in this caſe *the region above the navel can bear preſſure with the hand*, which it cannot do in inflammation of the ſtomach, nor pain from ſome other cauſes.

CURE. In full ſanguinary habits bleeding is adviſeable;—and to remove coſtiveneſs glyſters, (No. 25, 26.) which is very often an attendant; notwithſtanding which, ſhould it continue, opiates (No. 113.) are requiſite; though, in ſlight caſes, peppermint water will be ſufficient—till the pain has totally ceaſed for a day or two, cathartics, even the milder ones, ſhould be avoided. In order to prevent its return, the patient ſhould abſtain from all food difficult of digeſtion; all crude, flatulent, or leguminous vegeta-

bles;—the body ſhould be kept open, and a courſe of bitters and chalybeates (634.) be perſiſted in for ſome time.

If *from acrid bile* the pain is extremely acute, accompanied with vomiting of green materials like a leak, or verdigreaſe—ſometimes yellow, with ſuch tenderneſs above the navel, that the part cannot bear the leaſt preſſure—there is extreme debility, with great dejection of ſpirits; indeed the pain is ſometimes ſo acute as to bring on convulſions.

We muſt proceed as recommended (562.) where acrid materials were the cauſe; afterwards, when the ſtomach is perfectly cleanſed, opiates muſt be taken internally, (233.) or by way of glyſter; and perhaps it may firſt be neceſſary to premiſe bleeding, if the pain is extremely acute, to prevent inflammation.—The bilious colic ſeems to have the ſame origin, the ſeat of the affection only differing—to that, therefore, we muſt refer.

In caſe of poiſon being the cauſe, we muſt proceed in the ſame manner as in inflammation of the ſtomach from the ſame ſources—in gout or worms—ſuch remedies are ſerviceable as are adviſed in thoſe particular diſeaſes.

If from *debility,* we muſt proceed as directed (562.)

If from *extraneous bodies,* which are ſmall, and blunt, we muſt have recourſe to emetics—if long and pointed, the ſtomach ſhould be kept diſtended with materials of the demulcent claſs, ſo that an opportunity may be given for them to paſs through the lower orifice of the ſtomach, and along the courſe of the

in-

inteſtines; for if emetics are had recourſe to, there is great danger of their getting acroſs the upper orifice, or ſticking in the paſſage, and moſt probably terminating fatally.

If *from the inflexion of the lower part of the breaſt-bone*, there is a conſtant pain of the ſtomach, attended with vomiting, loſs of appetite; and from a continuance of the diſeaſe, a conſumption, called ATROPHY—the food and liquids are immediately rejected as ſoon as taken, and the pain continues to torment the unhappy patient for years.

Cupping-glaſſes applied to the region above the navel, and afterwards an aſtringent plaiſter, have been adviſed.

A reduction of it, by the manual operation of a ſkilful ſurgeon, has been aſſerted by BONETUS—as for my own part, palliative remedies I think the only things to be depended upon—the utility of which I have experienced. Keeping the ſtomach as empty as poſſible, eating ſmall portions of the moſt eaſily digeſtible food, often in the day—refraining from all which are flatulent—taking very moderate exerciſe—avoiding coſtiveneſs, and, in fine, ſo conducting the patient, that the ſtomach ſhall but be ſlightly diſtended, is all that can be done in this caſe.

If *from excoriations, or ulcerations of the ſtomach, or its lower orifice*, it is the moſt obſtinate and dreadful, for this may continue for many years—this is known by extreme increaſe of heat and pain on taking any thing acrid or hot—vomits here may become detrimental, and dangerous in the extreme—in this caſe

nothing can be done but giving all thoſe things which are ſoft, mild, and ſheathing; and what bids faireſt for relief is living ſolely upon a milk diet.

Beſides what we have here enumerated, the heart-burn will be attended ſometimes with an efflux of clear lymph like ſaliva, ſometimes taſteleſs, ſometimes acrid like the taſte of lime, and comes up at intervals in conſiderable quantity. This ariſes from a ſpaſmodic contraction of the ſtomach, and increaſed action of veſſels which ſecrete the thin fluids of the ſtomach and ſalivary glands, (6.)

In this caſe, the rough acerb fruits and warming vegetables may be uſeful, as horſe-radiſh, muſtard, quince, ſloes, medlars, &c.—watery fruits and vegetables ſhould be particularly avoided, as cherries, cucumbers, melons, and ſuch like; and aſtringents ſlightly cordial, (No. 61 to 65.)

§ 6. COLIC—COLICA,

ſo called from the colon, (45.) one of the inteſtines, being conſidered as the ſeat of this complaint.

—DESCRIPTION IN GENERAL. This is a painful complaint of the inteſtines, originating from a conſtriction, or obſtruction in ſome part, or parts of them, brought on by ſome internal ſtimulus, attended with an acute burning pain of the abdomen, particularly running round the navel, difficulty of breathing, heart-burn, nauſea, or vomiting of a bilious or viſcid matter, coſtiveneſs, the appetite and digeſtion weakened—a diſtenſion and inflation of the lower belly—thirſt—high-coloured, or yellow urine, often

often an obſtruction in making water---hiccough---fainting---delirium---convulſions, a rupture of the inteſtines, or mortification.

CAUSES. The *remote* or *inducing* are, ſpaſmodic affections, or biliary concretions, ſtopping the ductus communis choledochus, (32.)---acrid bile---different kinds of foul offenſive materials in the bowels---hardened fæces---worms---ruptures---remains of ſolid food ---earthy or ſtony concretions lodged in the inteſtines---compreſſion of them formed in any of the contiguous viſcera---introſuſception, or the running of one inteſtine into another, and there confined by ſome ſtricture---a thickening of the coats by ſcirrhus, cancer, &c.---particles of lead---unripe acid wines---or drinking too freely of things acerbly acid---or, in fine, whatever is poſſeſſed of the power of inducing the

CAUSE, *proximate* or *immediate*; which is a conſtriction or obſtruction in ſome part or parts of the alimentary canal, commonly the upper or lower orifice of the ſtomach, the lower portion of the duodenum, (43.) at the valve of the colon, (46.) and at its flexure where it turns up under the falſe ribs on the left ſide, (45.)

CHARACTERISTIC SIGNS. Pain of the abdomen, or lower belly, running round the navel, attended with vomiting and coſtiveneſs.

CURE. The indications are, a removal of the conſtricting or obſtructing cauſe, by taking off the ſpaſms, and evacuating the irritating matter, from whence they deduce their origin.

We have before treated of the inflammation of the bowels, between which, and the colic attended with local inflammatory ſymptoms, ſome make a diſtinction; this may be ſyſtematically right, but cannot be of any practical utility; for the mode of cure muſt obviouſly be the ſame—though we muſt obſerve, that the colic with any acute fever, or quick pulſe, heat of the whole body, ſweat, &c. appears only to be a ſlight inflammation of the inteſtines from ſome local cauſe, not producing general inflammatory ſymptoms.

But the colic pain will ſometimes be attended with great degree of flatulence, from the air in the bowels being rarefied, and expanding itſelf—hence pain, diſtenſion, coſtiveneſs, and rolling of wind in the lower belly—if the conſtriction of the bowels continue long, their motion downwards, called periſtaltic, will be inverted, and vomiting the conſequence.

That it is from wind which occaſions the ſtrongeſt ſymptom, is very obvious, by the alleviation from pain by the diſcharge of it downwards; from the pain purſuing the whole tract of the colon, (45.) or running round the lower belly, appearing alſo to affect the ſtomach; but that affection ſubſiding by the paſſing down of wind, or its change of ſituation; on preſſure by being mitigated rather than increaſed; and by not being attended by any remarkable thirſt, or alteration of the pulſe.

At other times, it will have for its aſſociate bilious vomiting, which is difficult to reſtrain; the patient will alſo have ſometimes a number of bilious ſtools—

when

when vomiting of green-coloured matter is the leading ſymptom, theſe attend heart-burn, loathing of food, hoarſeneſs, hiccough, heat, thirſt, and bitterneſs of the mouth—the urine is high-coloured, and made in ſmall quantity.

When *bilious ſtools*, the pain attendant generally affects the whole inteſtines, particularly the duodenum, (43.)—the lower belly is neither tenſe nor hot, as in inflammation of the bowels—the patient is affected with giddineſs—the pulſe is quick, though neither hard nor tenſe—and this diſeaſe is often ſucceeded by the jaundice.

In all theſe complaints, where the pain is very acute, bleeding ſhould be had recourſe to, though no inflammation ſhould actually exiſt, in full habits particularly, very early, to prevent that ſymptom ſupervening.—Emollient oily glyſters, (No. 25, 26.) warm fomentations, friction, and chamomile tea, in ſlight and common caſes, will ſubdue the complaint—but when more obſtinate, chicken water ſhould be drank plentifully; then glyſters thrown up occaſionally, and repeated—if the firſt does not anſwer, a ſecond ſtronger, (No. 114.)—ſhould theſe be inefficacious, oily purgatives may be tried alone, (No. 66, 99.) or mixed with Rochelle ſalt, and continued till a free evacuation is produced—caſtor oil is the moſt efficacious, as it often alleviates pain before it procures any evacuation, which it alſo does very quickly.

Sometimes liquids will be rejected, purgatives then in a ſolid form muſt be tried, (No. 115.) and continued every hour till the wiſhed-for effect occurs—but ſhould

ſhould the attendant pain be extremely ſevere, with cathartics we may couple opiates; or ſedative medicines may be given firſt, and a ſmall time afterwards, purgatives—by theſe means ſometimes the gentler purgatives will anſwer every purpoſe—bags filled with ſalt, oats, boiled bran, or water made hot, may be applied to the belly.

But ſhould there be any ſuſpicion of inflammation, the ſtronger ſtimulant cathartics muſt be avoided—the Epſom ſalt ſolution, (No. 97.) is preferable to other purgatives; for, diffuſed in that way, it is always pleaſant, and gentle in its operation.

We ſhould always inquire in theſe caſes, whether there be any rupture; for, from the ſtrangulation of the inteſtines puſhed out into the ſac externally, this complaint ſometimes ariſes.

In order to ſtop the vomiting, the ſaline draught in a ſtate of fermentation (No. 59.) ſhould be tried—ſedative glyſters, (No. 116.) and plaiſters of mithridate, may be applied to the ſtomach—leaves of common garden mint, boiled in port, and laid on the pit of the ſtomach and wriſts, have been found ſometimes ſuperior to every other application.

Should there be any appearance of bile copiouſly diſcharged, ſoftening glyſters, ſuch as decoction of linſeed and marſh-mallows, with oil, ſhould be had recourſe to—acidulated drinks alſo, with lemon or orange juice, vinegar, apple-water, &c. chicken-water, ſedative emulſions, (No. 81. 83.) to which may be added thirty or forty drops of the tincture of opium, if the pain is violent—and the patient ſhould be put into

into a warm bath, and remain in it ſo long as he can bear it without diſtreſs.

If this complaint, from a bilious cauſe, ſhould return, which it is apt to do, a courſe of ſaponaceous and deobſtruent medicines, (No. 117.) with Seltzer waters, or the water of Bath, or Aix la Chapelle, ſhould be had recourſe to, in hopes of performing a radical cure.

So difficult is it ſometimes to procure a paſſage through the inteſtines, that when the gentler cathartics fail, the moſt powerful ought to be tried, (No. 108. 115.) to which may be added from half a grain to a grain of opium; or opiates may be given with liquid purges, (No. 97 to 99.) tobacco glyſters, two drams of the leaves in decoction, or ſmoke, or things which act by their weight, have been recommended, quickſilver, two or three ounces, ſwallowed in a little broth every two or three hours, or leaden bullets; or taking the patient out of bed, and daſhing cold water on his legs and feet, whilſt he ſtands bare footed on a cold flag, has been attended with ſucceſs.

A purging once procured, it ſhould be continued ſome days by the uſe of cathartics, giving opiates at night, until the ſoreneſs and diſtenſion of the belly go off, and no hardened fæces appear in the ſtools.

§ 7. Nervous Colic.

In this complaint, contrary to the other, the vaſcular ſyſtem ſeems but ſlightly, if at all affected; for the pain will continue extremely ſevere for five or ſix days; ſometimes for fourteen or fifteen; yet the pulſe will not be-

be quicker, or more diſturbed than in health; nay, indeed, it has been ſometimes ſlower.

It is called RACHIALGIA, from the Greek words *raxis*, ſpina dorſi, the ſpine of the back, and *algos*, dolor, pain; becauſe the origin of the complaint has been attributed to an affection of the ſpinal marrow—alſo the COLIC OF POICTIERS, becauſe there it is endemial, or peculiar to the country—DEVONSHIRE and WEST INDIAN COLIC, from its being common in thoſe countries—PAINTERS, PLUMBERS, POTTERS, MINERS, from their being moſt ſubject to it, and SATURNINE COLIC, from its frequently affecting the makers of white lead, or the reception of the particles of lead into the habit.

DESCRIPTION. This complaint is attended with very ſevere pains in the back and loins, as if it was in the center of the meſentery, (50.) which do not increaſe on preſſure—the navel is very often drawn inwards, and the inteſtines ſometimes alſo to the ſpine; ſo much ſo, indeed, that the forcing up of glyſters has been impracticable—the body is coſtive, and the complaint extremely obſtinate; ſometimes terminating in torpor, or numbneſs of the hands, and palſy; at others, in chronical fixed contractions of the limbs.

CAUSES. The *remote* or *inducing* are, particles of lead received into the habit—or the ſmoke from lead—or drinking water which runs over its ore—unripe acid wine—cyder---punch---and white wine not ſufficiently fermented---eating or drinking too freely, or too frequently of things acerbly acid. The *proximate* or *immediate*, ſimilar to that of the colic, (567.) and the *characteriſtic ſigns* alſo, if we add, the pain creeping more

particu-

particularly to the loins and back, with a retraction of the navel, and ſometimes of the inteſtines, inwards.

CURE. Before the complaint is confirmed, in the beginning, ſucceſs may be expected from the application of ſuch glyſters as were before preſcribed, (No. 25, 26.) adding to them caſtor oil, and keeping the body open with emulſions of the ſame oil, (No. 66.) with which two or three ounces of tincture of ſenna may be mixed.

Cold muſt be avoided, and a very light eaſily digeſtible diet ſtrictly adhered to.

But in the more advanced ſtage, where there is generally a vomiting of green bile, *the diſcharge is to be encouraged,* by drinking freely of thin weak broth—*the hardened excrements evacuated by repeated glyſters---an alleviation of pain procured* by more than common doſes of opium, (233.) and theſe repeated—the belly muſt be fomented with warm fomentations, (No. 85. 111.) —warm bathing partially uſed—and the umbilical region bliſtered.

I have ſometimes found great benefit by opiated emulſions, (No. 118.) given till ſtools were procured freely; afterwards opiated antimonials, (No. 119.) occaſionally giving the emulſion.

In Charleſtown they adopt the following ſcheme:

Firſt, they bleed, then give the glyſter, (No. 114.) and repeat it two or three times, till a ſtool or more are procured—if this does not alleviate the pain, then an opiated glyſter, (No. 116.) and the following morning exhibit the vitriolic mixture, (No. 120.) — the effects produced are generally a diſcharge of a great quantity

quantity of acrid bile, for the firſt four or five days, upwards and downwards, which by degrees grows leſs, leaving gradually only a ſlight nauſea, a few yellow ſtools daily, and ſometimes not any.

Broth, gruel, and panada, are allowed as diet—if ſuch food is loathed, about the eighth day, bread and boiled chicken are allowed, with rum plentifully diluted as beverage—all fermented liquids and acids are prohibited, and ſo is ſour punch, for ſome months; and the patients return to their common mode of living by ſlow degrees.

If a pain in the ſtomach continues, which is ſometimes the caſe, rhubarb is adviſed, and a plaiſter of galbanum applied to the ſtomach.

Though death by theſe means ſhould be avoided, not unfrequently a palſy ſucceeds. This complaint has been relieved, ſometimes cured, by rubbing the limbs and down the back along the ſpine, with Barbadoes tar and rum, or rock oil, (229.)—the Barbadoes tar, or balſam of Peru, taken internally, has been thought ſerviceable. (No. 121.)

But ſhould theſe not ſucceed, change of climate, ſea voyage, or the natural hot baths, are the only remedies from whence ſucceſs is to be expected.

§ 8. Pain of the Liver, or Hepatalgia,

from *epar*, jecur, the liver, and *algos*, dolor, pain.

When pain affects the liver, as well as ſpleen, it is very often impoſſible to diſtinguiſh them from ſome of the ſpecies of colic, during the life of the patient; nay, indeed, ſome practitioners think it unneceſſary, ſince

ſince they require the ſame mode of cure as the colic from a bilious cauſe. (569, &c.)

But as theſe ariſe from different cauſes, it may not be uſeleſs to deſcribe ſome of them; viz. thoſe which ariſe from *ſcirrhoſity, or hard tumefaction of the liver,* (28.)---*obſtructions of the gall ducts,* (31.) from very viſcid bile—the gall bladder (31.) being alſo full of bile—and *gall ſtones,* ſo called.

When pain of the liver owes its origin to SCIRRHOSITY, it is attended with the following ſymptoms:

DESCRIPTION. There is a tumor and hardneſs on the right ſide below the ſhort ribs—a ſenſe of weight, with a dull and tenſive pain, which is conſtant—the patient breathes with difficulty, and has a dry cough—and, after eating moderately, there comes on a loathing, and ſenſe of preſſure on the ſtomach, with an increaſe of the difficulty of breathing---beſides, he cannot lie with eaſe on his left ſide—the countenance is yellowiſh, pale, and ſallow—the urine often of an orange colour, and depoſits a thick mucus ſediment—theſe are generally the firſt appearances, which, if the complaint continues, as is too frequently the caſe, the feet are ſeized with a ſoft paſty ſwelling—the ſuperior parts fall away—and the concluſion is, a dropſy of the belly, with a remittent fever.

When the cauſe is OBSTRUCTION OF THE GALL DUCTS, from biliary or viſcid obſtructions, the ſymptoms of a ſcirrhous liver, which come on in the beginning, attend but in a much ſlighter degree—beſides, there is a fluſhing heat of the face, with redneſs and heat coming on now and then in the palms of the

hands

hands---an irregular thirſt---dryneſs, and bitter taſte in the mouth---a dry cough---viſcid ſaliva---loſs of appetite---heart-burn---wearineſs and heavineſs of the limbs---increaſe of pain on touching and preſſing the left ſide---and the habit moſt commonly coſtive—in this caſe the hardneſs on the right ſide is not ſo firm as in the former, nor are there any paſty ſwellings, or hectic ſymptoms.

When it ariſes from GALL STONES, there is a deep-ſeated and excruciating pain on the right ſide of the ſtomach, extending to the back, about the place where the ductus communis choledochus, or duct of the gall-bladder, (32.) is inſerted into the duodenum, (43.) which remits and increaſes; the patient complains of ſickneſs, and vomits much—the right ſide is diſtended with flatulence —the belly coſtive—the excrements pale-coloured, ſometimes white—the pulſe is weaker, but ſcarce at all quickened, unleſs the pains are very violent, and continue long—indeed, *the violence of the pain being unattended with fever, and quickneſs of the pulſe*, is conſidered as the certain ſymptom of this diſeaſe—the patient, either in an erect poſture, or lying on the left ſide, feels much uneaſineſs—hence becomes reſtleſs—there attend alſo difficulty of breathing---heart-burn, and ſometimes convulſions—at firſt the urine is pale, afterwards yellow---and the ſkin and white of the eyes have a jaundice-like appearance---the pain at laſt vaniſhes ſuddenly, which is ſometimes ſucceeded by a looſeneſs, by which the gall ſtones are thrown out of the habit—and the yellowneſs wears gradually away.

CURE.

CURE. Pain in the liver from ſcirrhoſity, (575.) is apt to attack gluttons—hard drinkers---thoſe who lead indolent ſluggiſh lives---and alſo ariſes from ſuppreſſion of ſome hæmorrhages---bruiſes upon the right ſide ---and very often in thoſe afflicted with long-continued intermittent fevers---and generally proves fatal, when once completely formed---though, if attacked in the beginning, it may be ſometimes prevented.

Decoctions of vegetable aperients, with the more powerful attenuating gums, (No. 117.) joined with mercurials and cathartics, (246. 265 to 267.) are ſerviceable; alſo graſs-roots, dandelion, endive, ammoniacum, myrrh, rhubarb, aloes, calomel, ſmall doſes, not to ſalivate; hemlock, (233. 236.) in all curable caſes is very uſeful.

In CONSTITUTIONS *conſidered as dry and bilious*, (75.) decoctions of the mild opening roots, goat's whey, and tartarized iron. (210.)

In *the cold and phlegmatic*, (75.) the mode here recommended will be proper when the complaint ariſes from obſtructions of the biliary pores; but, in delicate and irritable habits, ſpaſmodic affections will ſometimes be the cauſe, ſedatives and antiſpaſmodics may then be joined with the aperients, aſafœtida, camphor, (228, 229.) or with opium, (233.)—and when, by theſe means, the bile has paſſed into the bowels, a courſe of bitters and ſteel may be neceſſary to complete the cure, (No. 61 to 64.)—taking care always to keep the body open with ſuch medicines as are beſt adapted to move the bile. (No. 108. 117.)

Bath water, and chalybeate ſprings in general, are beneficial and proper to prevent a relapſe.

When it ariſes from GALL STONES, we muſt endeavour to promote the expulſion by long perſeverance in the uſe of emollients, (216.) and gentle cathartics, (263, 264, 265.) (No. 66. 98, 99.)—warm baths afterwards, occaſionally repeated, in which a cathartic may be given—this mode has proved ſucceſsful—vomits, and ſtrong expiration, with glyſters of freſh urine, and ſage infuſion, have fortunately ſucceeded—opiates ſhould be adminiſtered to alleviate the pain, joined with aperients; becauſe they promote at the ſame time a relaxation of the duct---æthereal ſpirit of turpentine, (No. 122.) has been recommended as a ſolvent.

In habits full of blood, in any of theſe complaints, bleeding may be had recourſe to, leſt inflammation ſhould be the conſequence of the violence or long continuance of the pain.

Old people and women are moſt ſubject to this complaint—thoſe who lead ſedentary lives, drink much of ſtrong ardent ſpirits, feed on viſcid, coarſe, and dry aliment, or are ſubject to the ſtone and gout.

In order to prevent a return of theſe complaints, gentle exerciſe, particularly riding on horſeback, ſhould be perſevered in; light eaſily digeſtible food taken, avoiding all that is viſcid.

§ 9.

§ 9. PAIN OF THE SPLEEN, OR SPLENALGIA,

from *ſplen*, the ſpleen, and *algos*, dolor, pain.

Here, as in the liver, the diſeaſe ariſes from ſcirrhoſity and obſtruction.

DESCRIPTION. When from the FIRST, it is diſcoverable by a hard tumor occupying the ſeat of the ſpleen, (36.) and reſembling its figure, attended with a ſenſe of weight---the tumor is ſometimes wonderfully large — ſucceeds a quartan intermittent, and often runs into a dropſy of the belly---the complexion of thoſe labouring under this complaint is of a lead colour---they grow very thin—are oppreſſed with difficulty of breathing—and have a ſenſe of weight, drawing the throat downwards towards the left ſide—they complain of oppreſſion at the ſtomach after eating—at laſt their feet become paſty, and they ſometimes have ulcers of the legs.

When from the SECOND, it does by no means reſemble the figure of the ſpleen, neither is it hard or circumſcribed—the pain is more acute; which, on the ſcirrhus being formed, becomes dull—attended with a ſenſe of greater weight.

In this there is perceived a load on the left ſide, afterwards ſome acute pain, particularly raiſed in running and walking—the colour of the face changes to one more livid—there is an univerſal laſſitude—difficulty of breathing from exerciſe—ſometimes a dry cough—now and then a palpitation of the heart—eruptions break out — the patients become hypochondriac

—have ravenous appetites, &c.—and the diſeaſe is extremely obſtinate.

CURE. The mode is ſimilar to what has been delivered on the pain of the liver from obſtruction. (577.)

CHARACTERISTIC GENERAL SIGNS. Thoſe of the ſpecific cauſes muſt be recollected from the particular deſcriptions—the general ones are, an uneaſy, dull, tenſive ſenſation, on the right or left, according whether the liver or ſpleen is affected; being free from that ſpecies of fever which attends inflammations of thoſe organs.

§ 10. Pain in the Kidneys and Ureters, or Nephralgia.

from *nephron*, ren, kidneys, and *algos*, dolor, pain.

This diſeaſe proceeds either from ſmall ſand-like appearances, or from a ſtony ſubſtance affecting the kidneys or ureters, (53. 57.)—in the firſt caſe it is called GRAVEL, in the laſt, STONE IN THE KIDNEYS; both which we ſhall treat under one head, as the mode of treatment of the former is ſimilar to the more gentle method uſed in the latter.

DESCRIPTION. The gravel is moſt common to old men, the ſtudious and ſedentary, and thoſe whoſe trades oblige them to ſit long confined in one poſture, as coblers, weavers, watchmakers, &c.—ſeldom affects the kidneys, but much more commonly the ureters and urethra, (65.) occaſioning oftentimes very great pain, which abating, ſmall ſtones like lentil-

til-ſeed, but rough, red, and very hard, are paſſed at that time with the urine—theſe ſeldom ſtick in their paſſage, and are ſcarcely diſſolvable by any known lithontriptic. (307.)

When there is a ſtone in the kidney, there is generally an excruciating pain in the loins, fixed and permanent, on that ſide where the ſtone lodges—the patients complain of heat—the body is coſtive—and the ſymptoms are aggravated after eating—when it falls into the ureters, the pain is increaſed, and extends along their courſe obliquely in the belly over the hip towards the bladder—men have at this time a painful affection, or drawing up of teſticle, women a numbneſs of the thigh and leg—nauſea and vomiting frequently occur—the urine is in part ſuppreſſed, and puts on various appearances; at firſt it is watery, afterwards more copious and turbid; frequently hot, and often bloody, or purulent—a difficulty of making water, or rather a total ſuppreſſion, comes on—great drowſineſs—inflammation—ulceration—and conſumption.

But it muſt be obſerved, that a ſtone may be lodged in the kidney without producing any uneaſy ſenſation, unleſs moved by a hot regimen, or mode of living, violent paſſions, ſtrong exerciſe, or jolting in a carriage over rough ſtony pavements.

CAUSES. The *remote* or *inducing* are, luxurious living, with weak digeſtive powers—gout and rheumatiſm—old age—ſedentary life—keeping much in bed, or in an horizontal poſition—drinking wine loaded with tartar, or water full of earthy or ſandy matter—peculiarity in the conſtitution to form this ſtony

ſubſtance—or an hereditary taint. The *proximate* or *immediate* need no ſpecification.

CHARACTERISTIC SIGNS. A fixed pain in the region of the kidneys and ureters, unattended with any acute fever, ſuch as accompanies the inflammation of theſe parts.

CURE. The indications are, to abate the uneaſy ſymptoms, by taking off the ſpaſmodic affection of, ſheathing and relaxing the parts, and facilitating the progreſs of the offending cauſe, that it may be evacuated—which purpoſes will be promoted by bleeding, emollient and demulcent decoctions drank plentifully, ſedatives, chiefly opiates, oily emulſions, and mild aperients, &c. (See Inflammation of the Kidneys. 543.)

All heating or ſtimulating diuretics are to be avoided, particularly where calculi are fixed, or very obſtinate to remove; for they are apt to aggravate the painful ſenſations, and bring on inflammation—infuſion of wild carrot-ſeed, (No. 123.) has been known to give conſiderable eaſe—a ſolution of kali impregnated with fixed air, (308.) given two or three times a day, and carried as far as the ſtomach will bear it, is in this caſe peculiarly applicable—the leaves of the bear's wortle berry, (211.) is here alſo beneficial—from decoction of raw coffee, twelve berries boiled in a quart of water till it becomes of a deep greeniſh colour, to eight or ten ounces, with twenty drops of æthereal ſpirit of nitre, twice a day for two months, great relief has been derived.

Still

Still, ſoap leys, (308.) taken in milk or veal broth, or ſoap and lime water, (308.) are conſidered either as perfect ſolvents, or rendering the rugged ſurfaces and ſharp points leſs capable of injuring the ſenſible membranes, where theſe hard bodies paſs through or lodge.

But ſometimes a ſmall ſtone will paſs through the ureters into the bladder, and from thence makes its exit: here then the diſeaſe terminates in the moſt favourable manner; but if it ſhould be too large, it remains there, forming a baſis, called Nucleus, for a larger ſtone---indeed, any hard ſubſtance lying in the bladder will give riſe to this complaint in conſtitutions replete with ſtony matter---in this caſe it is termed,

STONE IN THE BLADDER, or LITHIASIS,

from *lithon*, lapis, ſtone.

DESCRIPTION. In this diſeaſe, there is generally a pain in the bladder, eſpecially about its neck, and oftentimes bloody urine after riding on horſeback, on being jolted much in a carriage, a ſenſe of weight in the perineum, or part immediately before the anus, with an itching of the glans penis, (66.) a ſlimy ſediment in the urine, and frequent ſtoppages in making water.

But if the ſtone ſhould be ſmooth, of a round form, it may lie a conſiderable time before it is perceptible to the patient, till by its increaſe of weight, acquired by acceſſion of freſh matter, it creates uneaſy ſenſations—but ſhould it be angular, or have a

rugged ſurface, yet ſmall in ſize, it generally occaſions pain and bloody urine, or a diſcharge of ſlimy fluid, with a fruitleſs effort to go to ſtool, called *teneſmus*, and difficulty of making water.

All theſe ſymptoms though are fallacious—examining therefore with the inſtrument called a STAFF, uſed by ſurgeons for diſcovering the ſtone in the bladder, is chiefly to be depended upon; and I believe, when one is found too large to paſs, cutting is the the only remedy, which muſt be committed to the hands of a ſkilful and judicious operator.

Of the cure by internal remedies, we muſt refer to what has been ſaid above in the cure for pain in the kidney and ureters, proceeding from calculi there.

In this place may be inſerted thoſe complaints where the urinary paſſages are affected, and properly divided into three, according to the nature of the affection—as

1. A SUPPRESSION OR RETENTION OF URINE,

named ISCHURIA, from *iſko*, cohibeo, to reſtrain, and *ouron*, urina, urine.

2. STRANGURY—STRANGURIA,

from *ſtranx*, gutta, drop, and *oureo*, to make water---when water is made by drops as it were, and there is a perpetual propenſity to make it.

3. DY-

3. DYSURY---DYSURIA,

from *dus*, infeliciter, painfully, and *oureo*, when the ſtrangury is attended with heat, or a ſenſe of ſcalding.

The FIRST may ariſe from inflammation of the kidneys, or a ſtone, and becomes a ſymptom, and then muſt be cured as adviſed in caſes of nephritis, (543.) and nephralgia, (580.) but ſometimes it derives its origin from mucus thrown into the veſſels of the kidneys, (53.) in ſuch a degree as to hinder almoſt the total ſecretion of urine.

DESCRIPTION. In this caſe there is generally a ſmall quantity of turbid urine made, without any pain of the region below the navel, or ſwelling over the bone at the lower part of the belly, called os pubis, or any ſigns of the ſtone or gravel, but a dull, heavy pain over the loins; and this happens in conſtitutions which are generally phlegmatic, (75.) mucous diſeaſes having preceded, and urine before made loaded with mucus.

CURE. Stimulating diuretics, (271, 272.) ſuch as muſtard, horſe-radiſh, with ſquills; alſo ſoap, (273.) in order to clear away the mucus, free the urinary veſſels, leave at liberty and ſolicit the ſecretory veſſels of the kidneys to perform their office; for in theſe caſes we find little or no urine comes into the bladder. We muſt obſerve, that when the *ſuppreſſion* is total, there can be little or no hope of giving relief; it is only in caſes where it is partial, that our expectations with ſucceſs can be flattered.

When

When the urine is retained in the bladder, we obſerve a ſwelling of the loweſt part of the belly above the bone ſituated at the bottom, attended with pain, and often a ſenſe of fulneſs, and preſſure at the neck of the bladder.

CURE. Whatever the cauſe, the mode of relief is ſimilar; if the pain is great, blood ſhould be taken away, and teribinthinate glyſters (No. 124.) thrown up; fomentations (No. 85. 111.) ſhould be uſed to the belly; the patient ſhould be kept perfectly quiet; the CATHETER, or an inſtrument to draw off the urine, be as ſoon as poſſible made uſe of; and ſhould the retention return in eight or twelve hours, the operation muſt be repeated, and this occaſionally till the cauſe creating it be removed, which may be various, and depend on other diſeaſes of the machine---as *paralytic affection of the bladder—ſwelling of the piles —indurated excrements—fungus ſwellings in the urethra*, (p. 65.)---*tumor of the proſtate gland*, (p. 65.) *hyſterics, ulcers, ſcirrhus, or cancer of the bladder---pregnancy*; for the cure of which we muſt apply to thoſe things which are adviſed in ſuch of theſe complaints as appear to be the acting cauſe.

IN THE SECOND AND THIRD DIVISION we find water paſſes from the bladder but with painful ſenſations.

DESCRIPTION. Beſides the effort to unload the bladder by paſſing urine by drops, and with great pain, and ſometimes ſcalding, the ſtimulus, after a ſmall quantity of water has been made, goes off, and ſoon returns; the feveriſh affections are increaſed, the ſkin grows hot, the belly ſwells, at the lower

lower part, particularly the penis, and the part running to the anus, appear full; the body is in general coſtive; and there are frequent efforts to go to ſtool; there is alſo a perceptible pain in the back and lower part of the belly, an uneaſineſs at the pit of the ſtomach, and vomiting ſometimes attend.

CAUSES. Thoſe which are conſidered the *remote* or *inducing* are ſaid to be—an acrimonious diſpoſition of the humours; cantharides internally taken; the application of bliſters; and matter carried from the kidneys, or tranſlated from any other of the ulcerated viſcera; ſtrongly ſtimulating injections, or venereal ulcers of the urethra, (65.) inducing inflammation, expoſing the anus to the cold air, particularly during the operation of ſmart cathartics; an inflammation of the rectum, (49.) or ſuppreſſion of the piles.

The *proximate*, or *immediate*, an inflamation of the ſphincter (58.) of the bladder, or a deprivation of the mucus which defends it from feeling the irritating power of the urine, as it paſſes through it.

This diſeaſe is by no means dangerous, and terminates in the ſame manner as do other local inflammations, *though extremely rarely in mortification.*

CURE. This requires no mode of treatment different from other local inflammations, particularly that of the bladder, (546.) only we ſhould obſerve great caution is neceſſary in attempting to paſs the catheter, leſt we ſhould increaſe the irritation; and indeed ſhould that operation be impracticable, a puncture may be made into the bladder in caſe of great emergency, through the perineum, the part which lays for-

forwards before the anus; ſome recommend it over the pubis; but the former is much the more eligible; in theſe caſes glyſters of warm oil, and tincture of opium, are highly beneficial.

§. Rheumatism—Rheumatismus,

from *reo,* fluo, to flow down, or upon, as the ancients conſidered it to ariſe from a defluxion of ſome humour on the particular part affected. There are two other complaints properly come under this head, called

Hip Gout, Ischiatica, or Sciatica, and the Lumbago, deriving their names from the parts they affect; the former attacking the hip, Ischium, and the latter the loins, Lumbi—hence their derivations —hence the rheumatiſm is conſidered as general and local; and it is alſo attended with febrile affections, frequently—ſometimes not—hence ſtyled *acute* and *chronic.*

DESCRIPTION. When it affects the habit generally, it begins with a coldneſs and ſhivering, which are ſucceeded by heat, reſtleſſneſs, coldneſs, and heavineſs of the limbs; the body is commonly coſtive, the patient complains of thirſt, and the pulſe is quick and hard.

To theſe ſucceed in a little time acute pain, attacking particularly the large joints, tendons, and their expanſions running along the courſe of the muſcles; which pain is increaſed on motion, often changing its ſituation, and where it fixes there comes on ſwelling and inflammation; it ſometimes attacks the head and ſtomach, and very often all the febrile ſymptoms

toms will go off, and leave the pain remaining. The blood taken away has the appearance of that of pleuritic patients; this is called the acute RHEUMATISM; but when it is not attended with febrile affections, the pain flies from one part to another, giving a ſenſe of ſtiffneſs to the muſcular or ligamentous parts, and is ſeldom attended with any ſwelling.

When the pain recedes internally, there ariſes much uneaſineſs and inward diſtreſs, which on re-appearing go off.

WHEN IT ATTACKS THE HIP, it impedes the free motion of the leg, occaſioning pain and an halting in walking, or dragging of the leg; the pain often deſcends from the hip along the thigh and leg to the feet; and it is ſometimes attended with a violent fever; in this caſe the ſeat of the affection is ſometimes in the joint of the hip, and at others in the nerve called ſciatic.

WHEN IT SEIZES THE LOINS—In them there is a very acute pain, with great difficulty in raiſing the body into an erect poſture; ſometimes the pain deſcends to the lower part of the back, to the thigh-joint, or through the ſides towards the bladder—here the muſcles of the loins, or the ligaments of the vertebræ, are the ſeat.

CAUSES. *The remote*, or *inducing*, are, an expoſure to cold ſuddenly whilſt hot, too great loſs of blood, or ſevere purging, hard drinking, immoderate venery, indigeſtion, a vitiated ſtate of the fluids from other diſeaſes, a too great fullneſs from evacuations ſuppreſſed, and often from quick changes of the weather.

ther. The lumbago will alſo be brought on by lifting too heavy weights, in habits diſpoſed to rheumatic affections.

The *proximate*, or *immediate*, have been ſuppoſed to be a viſcid acrimonious ſerum obſtructing the ſerous and lymphatic veſſels of the muſcles, but particularly of the membranes, or ligaments; or rather a peculiar acrimony, electively affecting the larger joints, membranes, and tendons of the muſcles.

CHARACTERISTIC SIGNS. This diſeaſe ariſes from an external, and, for the moſt part, from an evident cauſe, attended with pain about the joints, following the courſe of the muſcles, affecting the knees and the larger joints rather than thoſe of the hands and feet; ſometimes the hip, muſcles, and vertebræ of the loins: frequently having febrile affections for its aſſociate, ſometimes not.

CURE. When it is attended with febrile ſymptoms, we muſt have recourſe to bleeding, and that repeated according to the ſtrength of the patient, and violence of the inflammatory affection; and two drams of nitre diſſolved in a quart of water-gruel ſweetened with honey, and acidulated with lemon juice, forms not an inefficacious remedy, giving a tea-cupful every ſecond hour, throwing up occaſionally glyſters, or giving occaſionally cooling purges, to keep the body open, (P. 264, 265. or No. 3. 22, 23, 24.)---to the nitre may be added one-eighth of a grain of tartariſed antimony in each doſe, or to the purgatives.

Or the antimonial nitrated powder, (No. 125.) with the volatile ſaline mixture, may be given every five

five or ſix hours, (No. 126.) adding two or three grains of the powder to the night doſe.

Should theſe not keep the body open, glyſters may be given, or aperients added to the powder or mixture.

Theſe generally abate the febrile ſymptoms, mitigate the pain, and evacuate the acrimony, by keeping up a continued, gentle perſpiration.

When the diſeaſe is on the decline, the rapidity of the fever and the violence of the pain are abated, *not before*---ſteams of warm water may be conveyed to the parts affected, or friction if the parts can bear it, or liniment of water of acetated ammonia, and oil may be rubbed warm into, and a flannel worn over the part.

After ſufficient bleeding, and emptying the inteſtines, partial or general warm baths have been found to give great relief; and our patients ſhould uſe the ſame ſort of diet as recommended in inflammatory fever, (329 to 331.) but when all the febrile ſymptoms begin to abate, muſtard whey, (No. 127.) will be an uſeful drink.

Now from experience we find, though the criſis of this complaint happens either *by ſweat*, or *urine* dropping a yellow ſediment, *looſeneſs*, or depoſiting an humor upon the exterior ſurface, particularly the legs---ſtill it is but conveyed out of the machine by the pores of the ſkin---hence a courſe of diaphoretics are adviſed, and the patient ordered to lie in blankets in preference to linen, in order to add to their efficacy.

When

When the pain goes off, and the fever ſubſides, the diet ſhould be more ſubſtantial; and with intent to clear the conſtitution as perfectly as poſſible from the remains of the offending cauſe, a decoction ſhould be taken of diaphoretic woods, (No. 88.) or the compound decoction of ſarſaparilla---ſhould ulcers happen upon the legs, they ſhould not be dried up too ſoon, for fear of imprudently repelling the humour to ſome internal part, which might prove more dangerous.

But ſometimes, after the febrile affections are totally gone off, the pain ſtill continues, and here we muſt labour to attenuate and throw out the acrimony which creates the painful affections, by a courſe of gentle diaphoretics---ſuch as compound powder of ipecacoanha---or antimonials (360.) joined with opiates, in order that reſt may be procured, and the patient's ſtrength ſupported.

Stimulants are here alſo required, as tincture of guaiac. 30 or 40 drops dopped upon ſugar, and mixed with peppermint water, three or four times a day, or gum guaiac. made into a draught, with 30 or 40 drops of ſome volatile ſpirit, (No. 128.) or gum guaiac. and quick lime, equal quantities, well rubbed together---then lime water poured on, and when it has ſtood ſome time, decant the limpid part---to this add a few drops of any volatile ſpirit, and it will mix with water without ſeparation---ſometimes there will appear an intermiſſion in the pains; and where, at the onſet of the diſeaſe, there have been profuſe diſcharges by the ſkin, with a copious depoſition in the urine;—

bark

bark (300, 301.) is highly ſerviceable, united with volatile tincture of guaiacum, (278.) and has been known to relieve very obſtinate caſes, particularly in debilitated habits.

The CHRONIC RHEUMATISM chiefly affects old men, or thoſe who by indiſcretions have ſo weakened their conſtitutions, that they are reduced to that ſtandard. The attack of this is not ſo general, ſeldom affecting ſo many places at once; nor do the parts appear ſo red or ſwelled---it returns at intervals, without any febrile affections almoſt, or ſweat---and there are ſometimes tumors of the colour of the ſkin, or very ſlightly red, riſing in different parts, rather round, of the ſize of a nut, affecting chiefly thoſe of full habits, and women who have not their menſes.

In full habits bleeding may be had recourſe to *once*---bliſters and ſudorifics are more uſeful---repeated purging expedites the cure.

Mercurials, joined with diaphorets (No. 87.) are extremely efficacious---and alſo the addition of gum guaiacum to purgatives, (No. 19, 20.)— guaiacum given from day to day, ſo as to procure two or three ſtools every day, has been often attended with ſucceſs; or on the nights previous to giving a purge (No. 19, 20, 21.) in the morning, calomel joined with guaiacum has been of great uſe, (No. 129.) ---when the pain is excruciating, opiates (232.) may be given at night.

Volatiles, and opiates externally applied, are often attended with ſalutary effects, (No. 107.) or ſtimu-

lating plaiſter, (No. 130.) ſufficient to create proper irritation over the part affected.

Oil of turpentine has been ſpoken of as an internal as well as external remedy, (No. 122.)

Electricity has been recommended for 15 days, a quarter of an hour each day, drawing the ſparks through the parts affected, and giving a few general ſhocks.

In order to prevent relapſes, a flannel ſhirt ſhould be worn next to the ſkin; compound decoction of ſarſaparilla with milk taken for a month; now and then the warm bath ſhould be had recourſe to, and at the proper ſeaſon ſea-bathing.

Some of theſe modes will be ſufficient in common caſes; but in ſuch as are more obſtinate, change of climate is very often requiſite, and alſo the natural hot baths---or in perſons whoſe vaſcular ſyſtem acts with freedom, nothing is more conducive to prevent its return than cold bathing.

In thoſe rheumatic complaints called SCIATICA, or HIP GOUT, and LUMBAGO, as they are of acute or chronic kind, ſo muſt they be treated in the ſame manner as we have ſpecified in general rheumatiſm---only in the hip-gout, when the diſeaſe has been obſtinate, an iſſue cut above, or below the knee, has been of great ſervice, as alſo bliſtering the thigh.

§ 13. GOUT,

ſo called from the French word *goutte*, an acrid defluxion---in medicinal language it is called ARTHRITIS by many, from *anthron*, articulus, a joint, becauſe it affects

affects the joints---by ſome PODAGRA, from *pous*, pes, the feet, and *agra*, captura, ſeizure, becauſe they conſider the feet as its natural ſeat---and though it is thought, that there is truly only one ſpecies, yet, according to the different appearances it puts on, it has been diſtinguiſhed---all which may very properly come under two heads---the REGULAR, or FIXED---the IRREGULAR, or UNCERTAIN, GOUT, reſpecting the ſeat it occupies—both theſe ſpecies, which we ſhall proceed to deſcribe, appear to depend upon the ſtrength or weakneſs of the whole, or ſome part or parts of the conſtitution.

DESCRIPTION. Before the fit comes on, the patients moſt commonly experience a general laſſitude and wearineſs---are low-ſpirited—complain of a load and fullneſs of the ſtomach after eating—are ſqueamiſh very often, and throw up wind—the belly is diſtended with flatulence — the habit coſtive, the ſweating or moiſture of the feet goes off, and the veins there appear full.

After theſe an acute pain for the moſt part ſeizes the joint of the great toe, accompanied with a ſenſe of coldneſs, as if cold water was poured down—ſlight ſhiverings, and other febrile affections—a ſhooting, gnawing, pungent, or burning pain, ſeizes the ſmall bones of the foot, or they feel as if ſqueezed ſtrongly with a hand—in about 24 hours, the part begins to look red, and ſwell—a gentle breathing ſweat comes on, and then the pain begins to decreaſe, and the fever diſappears.

In the morning patients find themſelves better, in the evening worſe, becauſe at that time the fit comes on—during the fit men become iraſcible, and are eaſily irritated—they have little or no appetite—the body is coſtive; and a painfulſenſation of the part accompanies the whole fit—on the firſt days the urine is high-coloured, and diſcovers a brick-coloured or red ſandy ſediment.

In proportion as the conſtitution is ſtronger or weaker, ſo does the fit go off quicker or ſlower; at which time an intolerable itching is perceived between the toes, and the ſcarf ſkin falls off in ſcales like bran, —the joints feel ſtiff as if they were covered with plaiſters and dry, and a period is put to the diſeaſe for ſome time—which again returns.

This is the caſe of the gout in its firſt attacks, ſo long as the conſtitution preſerves a proper degree of power; but in proceſs of time, as the habit becomes weaker, the complaint takes deeper root, the diſeaſe ſeizes the hands, wriſts, elbows, knees, and other parts—hard chalky tumors are formed, and the diſtorted limbs loſe all motion. At this period the fits continue almoſt the whole year, and the afflicted make large quantities of pale urine; they are alſo tormented with piles, putrid eructations, ſpaſmodic affections, ſtony concretions in the kidneys, gravelly complaints, and loſe all appetite.

The ſtrength of the conſtitution ſtill failing more and more, till it becomes almoſt exhauſted, the gouty matter, incapable of being thrown out upon the extremities, affects the internal parts of the ſyſtem, and

produces complaints peculiar to thoſe parts from the ſtimulus it there occaſions—*ſometimes upon the head*, producing apoplexy, lethargy, palſy, delirium, tremors, and univerſal convulſions—*ſometimes upon the lungs*, hence aſthma, cough, ſuffocation—*ſometimes upon the membranes of the cheſt*, occaſioning pleuriſy—*or on the ſtomach and inteſtines*, whence internal uneaſineſs and oppreſſion, ſickneſs, vomiting, looſeneſs—during the continuance of theſe affections, there is no pain in any part, otherwiſe it generally exerts itſelf—at length, the conſtitution being worn out, and having loſt all its power, the vital parts, as the brain, lungs, and heart, begin to be depreſſed, and the machine falls a ſacrifice to its own weakneſs, and the violence of the morbid affection.

This deſcription comprehends the gout in both its forms of regularity or irregularity—it being conſidered THE REGULAR GOUT, when it fixes upon *the feet*, and is attended with a ſufficient ſtrong inflammation, continuing for ſome days, and gradually going off, with ſwelling, itching, and peeling off of the ſcarf-ſkin, in form of ſcales, like bran.

THE IRREGULAR, when it attacks other places, and is attended with internal debility of the ſtomach, or other parts; or has ſlightly affected the joints, and receded; or has not attacked them, but produces inflammation on ſome internal part.

CAUSES. The *remote* or *inducing* are, full, free, luxurious living—hard drinking, particularly acid and rough wines—indolence, or the omiſſion of accuſtomary exerciſe—relaxed, ſoft, and full habit—immo-

derate venery in youth—too ſudden changing from diſtilled liquors or ſpirits, to thoſe which are thin and watery—ſuppreſſed evacuations—and an hereditary taint.

It ſeldom attacks boys, caſtratas, or women, except viragos, or ſuch as have paſſed the time of having the menſes; but moſt commonly men in the decline of life, thoſe of lively imaginations, the ſtudious living a ſedentary life, and ſitting up late at night.

The *proximate* or *immediate* CAUSE is, a peculiar humour electively fixing in common upon the ſmall joints, or rather thin ligaments; or, perhaps, upon the membranous coverings of the nerves there ſituated; or ſometimes in other parts of the machine, particularly thoſe which are the moſt irritable.

CHARACTERISTIC SIGNS. A diſeaſe accruing without any evident external cauſe; but having, for the moſt part, an unaccuſtomary affection of the ſtomach preceding the attack, and alſo febrile ſymptoms—a pain in the joints, and that moſt frequently of the great toe, but *certainly* attacking chiefly the joints of the hands and feet---this pain returns at intervals, and often alternates with affections of the ſtomach and other internal parts.

Though we allow of two ſpecies of the gout, yet it is pretty obvious, that they depend only upon the different proportions of ſtrength in the conſtitution;--- and this will regulate our conduct in the mode of

CURE; and here are indicated a ſeparation and expulſion of the morbid matter, and a prevention of its return, or capability of reproducing its morbid effects

---in

---in all which we muſt be governed by the conſtitution. When the gout proceeds regularly, and fixes in the feet, patience and warm flannels are recommended---and the free uſe of wine allowed, under the idea of making the depoſition of the gouty matter more complete, and aſſiſting the local expulſion.

However, in the moſt ſimple and regular caſes, I do not recommend a total prohibition of all medical aſſiſtance; nor can I think that large draughts of wine, and loads of flannel, can compenſate for the loſs of *judicious* advice; for to me, who frequently have experienced the gout, it is clear, that ſome things may be done without any riſque of preſent danger, or future miſchief, which render the fit oftentimes leſs violent, ſhorten its continuance, and obviate the conſequent debility; for I am perſuaded, we ſuffer more from conſtitutional defects,—the effects of ſymptoms,—and miſmanagement, than from the nature of the diſeaſe itſelf, particularly in thoſe who labour under recent attacks---ſimilar inſtances we have ſeen in the treatment of other diſeaſes; as in the ſmall-pox, where warmth and cordials were inſtituted for the ſame purpoſe, of throwing off the morbid matter by which the fever was too highly increaſed, and deſtruction too often, and danger always the conſequence.

Let us ſee who are the men moſt ſubject to this malady---hard drinkers, particularly wine-bibbers---men of voracious appetites, who feed on high-ſeaſoned diſhes---venereal devotees---men of lively imaginations, and thoſe addicted to ſevere ſtudy, late

hours, and good living; and, in ſhort, moſt of thoſe who, by various means, weaken their digeſtive powers---if theſe have the gout in their habit, they ſeldom eſcape; if not, commonly acquire it from their own indiſcretion.

In men, before they fall into the gout, it generally happens, that their ſtomach and bowels are loaded with crude materials, viſcid humours creeping through the meſentery and other viſcera---local fullneſs in the liver---ſpleen or ſweetbread;---impeded, or irregular evacuations by ſtool, urine, or perſpiration---hence often an acrid ſtate of fluids.

Now, in ſuch conſtitutions, previous to the attack of the gout, we find a number of ſymptoms announcing its approach, ſuch as flatulence, load at the ſtomach, and nauſea, or ſickneſs.

Here it would be proper to adminiſter an emetic, (No. 11, 12. 38.) which ſome gentle purgative ſhould ſucceed, particularly of the aloetic claſs, (No. 108.) and this laſt given two or three times, at proper intervals; after which, ſtomachic bitters, joined with mild chalybeates, (No. 63 to 65.) or with ſome of the warm diuretics, (271, 272.) will be uſeful---theſe will ſuffice for the firſt ſtage; for I conſider the affection of the ſtomach as that ſtate of the diſeaſe; beſides, if the patient be of a full habit, and ſtrong, has a good pulſe, bleeding may very properly precede this courſe.

The mode of living ſhould be moderate, with reſpect to eating, drinking, and exerciſe---the fleſh of young animals allowed only once a day---vegetables ſtewed in

their

their own liquid, or with very ſmall portions of water ---the beverage, ſmall rum, brandy, or geneva and water---and the exerciſe chiefly on horſeback.

By theſe means the ſtomach and bowels are unloaded, and kept free from accumulations of crude and offenſive fæces; viſceral obſtructions are opened; the fluids made to circulate through the different viſcera; the maſs of blood puſhed forwards to the extreme parts, and ſurface of the body; the liver, ſtomach, kidneys, and bowels evacuate their contents in proper proportion; from the lungs, and through pores of the ſkin, is thrown out a due quantity of perſpirable matter, and noxious exhalations; the powers of digeſtion are increaſed; and, in fine, the whole machine put into as healthful a ſtate as the nature of the caſe will permit.

Prepared, therefore, for the ſecond or painful ſtage, if the method above purſued ſhould not prevent its acceſſion, it will come on leſs violently, continue a ſhorter time, and leave behind it leſs debility, from the conſtitution being freed from any ſuperfluous load, the vaſcular and nervous ſyſtem rendered ſtronger, and the fluids being put in a mild ſtate—however, even here ſomething may be done to mitigate any degree of violence which may occur from conſtitutional peculiarity, with reſpect to pain and febrile ſymptoms, which laſt are now to be conſidered only ſymptomatic.

Diluent cordials, wine and water, ſage, balm, or mint tea, may be freely drank, and antiſpaſmodics, diaphoretics, and antimonials, joined with camphor and volatiles, (No. 131.) may be taken—if the pain ſhould be exceſſive, not otherwiſe, gentle opiates may be

be added—æthereal ſpirit of vitriol, water of acetated ammonia, with aromatic confection, and æthereal ſpirit of nitre; theſe will promote perſpiration, and increaſe the urinary diſcharge.

The body ſhould alſo be kept open with ſmall doſes of rhubarb, caſtor oil, manna, lenitive electuary, and glyſters occaſionally, if neceſſary.

The diet ſhould be broths—gruels with a little wine, ſago, ſalop, arrow-root, tapioca, in which may be put wine, or a little brandy—freſh water fiſh, eels and ſalmon excepted—chicken, rabbit, veal, lamb, ſmall birds, and ſuch like may be allowed, but ſparingly; they had better be deferred, at leaſt a free uſe of them, till the decline of the fit.

As for external applications, during the fit, by whatever authority they have been recommended, I am averſe to their adminiſtration, becauſe the pain ſeems rather an inſtrument of nature for the full completion of depoſiting the whole of the gouty matter, creative of the fit, in the extremities—it ſhould be mitigated, if violent, by the means above deſcribed.

Indeed, if the pain is moderate, as well as the febrile ſymptoms, and the bowels as well as kidneys perform their functions fully and regularly, little is neceſſary to be done, till the decline of the fit, and then diaphoretics at night are uſeful.

After the fit is over, a gentle doſe or two of phyſic may be taken, and a little ſtomachic draught once a day for a week or ten days; and ſhould the joints affected remain weak, we may early uſe the fleſh bruſh, or flannels impregnated with frankincenſe, amber, or myrrh,

myrrh, by way of friction—however painful it may be, I would adviſe uſing the joint affected during the fit repeatedly; for that prevents the too great relaxation of the ligaments from the flux and ſtagnation of fluids in theſe veſſels.

By theſe means may this painful diſeaſe be mitigated, or the painful conſequences often ſubdued, and always made leſs ſevere: but if we would attempt the cure, we muſt try that in the periods where there is ſome long intermiſſions; and this by the preventive plan, (78. 139.) to which regimen there pointed out, ſtomachic and aromatic bitters ſhould be occaſionally taken, ſuch as quaſſia wood, (271.) or bark mixed with ſteel, (No. 61 to 65.) chalybeate waters, particularly thoſe of Bath—the ſkin ſhould be kept clean, and a flannel ſhirt worn next to it---a doſe of tincture of rhubarb, (266.) ſhould be taken twice a day;—and, in fine, ſuch things occaſionally applied to, as will contribute to ſtrengthen the ſtomach and digeſtive powers, keep up a free ſtate of perſpiration, and prevent the body from being coſtive.

Should theſe things fail, our laſt reſort muſt be a milk diet, and that conſtantly perſiſted in; though this will only ſuit ſuch as have a pretty ſtrong ſtamina: the weak and very debilitated would probably fall a ſacrifice to the change.

When the GOUT aſſumes its IRREGULAR FORM, we conclude it is owing to the weakened ſtate of the moving powers, not being able to throw the offending matter to the extremities, or, when there depoſited, of not keeping it in that ſituation—and hence the head, lungs,

lungs, ſtomach, kidneys, bladder, come to be affected, becauſe they poſſeſs more ſenſibility, and are more irritable than other of the internal parts—however, when it fixes on theſe parts, it is extremely hazardous, in proportion to its degree of violence—we, therefore, as expeditiouſly as we can, ſhould labour to throw it out of the habit into the extremities, particularly into the feet.

Now, if the HEAD and LUNGS are affected, and the habit full of blood, we muſt bleed in proportion to the ſtrength and fullneſs—afterwards apply bliſters to the inſide of the thighs and legs—bathe the feet in decoctions of horſe-radiſh and bruiſed muſtard-ſeed---ſome adviſe wine, or ſome other ſpirituous menſtruum---ſinapiſms, (No. 30.) may alſo be applied to the feet---and we ſhould give volatile camphorated medicines, (No. 33. 35 to 37.) and with cordials, (No. 13 to 18. 28 to 30.) to increaſe the motion of the blood, at the ſame time that it is ſolicited to the extreme parts.

But ſhould the STOMACH be the ſeat, vomiting will often be ſo violent, as to reject almoſt every thing which is taken; in order to allay this, we muſt depend upon cordials, as above, united with opiates; and occaſionally give opiates themſelves, as twenty or thirty drops, or more, of tincture of opium, at proper intervals—and hot wine, or rather brandy, with ſpices and garlic, ſhould be copiouſly adminiſtered—and ſtrong aromatic diaphoretics, as ſnake-root, camphor, volatile ſalts, &c. (277, 278, 279.)

Which remedies may be applied if the BOWELS ſhould be attacked, and in conſequence a looſeneſs ſupervene,

pervene, then to them we muſt add ſome aſtringents, as extract of logwood, (212.) tincture of catechu, (211.) columbo root, in powder, ten grains, in tincture, two drams—a drop or two of the compound water of acetated litharge, or ley of iron, called lixivium martis, given at proper intervals, have been efficacious, when other applications have failed.

Indeed, in every ſpecies of the irregular gout, whatever internal parts it attacks, the ſame modes of proceeding are neceſſary, as pointed out here in general, increaſing the force of the circulating powers, and ſoliciting a free flow of them to the extremities, endeavouring, at the ſame time, to alleviate the oppreſſive ſymptoms peculiar to the affected part; as when it attacks the kidneys, we have recourſe to emollient decoctions and glyſters, with warm baths, &c.

With regard to the mode of living to be obſerved by gouty patients, or thoſe in whoſe conſtitutions there is much of that matter creative of the diſeaſe, TEMPERANCE has always been adviſed—on which I ſhall beg leave to obſerve, that by this term is meant ſuch a mode of living as is beſt adapted to the conſtitution; for there may be as much intemperate miſchief to ſome habit by drinking too large a quantity of water as of wine; and, indeed, in every ſpecies of abſtinence, where purſued to ſuch extremities, as weaken rather than properly ſupport the powers of nature.

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SECTION XV.

MORBID EVACUATIONS.

WE muſt now proceed to treat of thoſe diſorders whoſe moſt ſtriking ſymptom is ſome evacuation, which is either not natural, exceeds the limits, or returns at more frequent periods, than what is uſual in a ſtate of health.

Theſe may be properly divided into ſuch evacuations as flow from the bowels, called ALVINE, from *alvus*, the belly—SANGUINARY, from ſanguis, the blood—called HÆMORRHAGES, from *aima*, ſanguis, and *reo*, fluo, to flow—and SEROUS, from ſerum, or the thinner fluids, as lymph, urine, mucus, ſweat, and ſimilar fluids.

Now all theſe evacuations are either ACTIVE or PASSIVE, ſimilar to what we have ſaid on inflammation, (468. 481.)—when they are ACTIVE, they are ſolicited by ſome morbid ſtimulus, or medicines by which the excretory veſſels of the parts affected are put into ſtronger action, and throw out their contents too copiouſly, or the veſſels burſt, and from thence is the evacuation produced—when PASSIVE, the proper powers of the living machine do not excite, but become defective in reſiſtance, as in caſes of a conſtant flux of urine from the relaxation of the ſphincter of the bladder. (58.)

Of theſe truths we ſhall be convinced, if we conſider, that all the fluids of the human machine are contained

in different receptacles, as bile, urine, &c. and alſo that part of them are kept in perpetual motion, as the blood, &c. part of them ſecreted and excreted; ſome of which ſecretions flow out of the body in regular ſucceſſion, as the matter of perſpiration; ſome are retained for a time, till nature calls them into motion for particular purpoſes, as milk, ſemen, &c.

It will therefore appear obvious, that whenever the force of the impelled fluid, or the weight of it, when collected, is too powerful for the natural ſtrength of the veſſels or cavities, the veſſels will burſt, or the ſphincters by which they are guarded, and prevented from pouring out their contents, be opened; hence, when either the expulſive force of the contained liquid is too great, and the ſides of the veſſels too much weakened; or when the fluids are in too great quantity, and the ſphincters in too relaxed a ſtate, the rupture of the one, the want of contractile power of the other, will neceſſarily lay the foundation for the diſeaſe; ſo that it may ariſe either from an increaſe of the expulſive and decreaſe of the reſiſting power, or from them both happening conjointly in the ſame habit, and at the ſame time.

The indications of cure will then be, in ACTIVE EVACUATIONS, to attempt to remove the morbid ſtimulus, and weaken the powers of the veſſels or cavities—in the PASSIVE, to ſtrengthen the veſſels or cavities, and give power to the ſphincters, that they may act with proper force.

CHAP.

CHAP. I.

ALVINE EVACUATIONS.

THESE may all come under the term LOOSENESS—DIARRHOEA, from *dia*, per, and rheo, to flow, though they are by authors divided into different ſpecies, either from the nature of the affection, or from the appearance of matters which flow through the bowels in too large quantity—the firſt of which is ſtiled, DIARRHOEA, or COMMON LOOSENESS, when there is a conſtant and remarkable evacuation by ſtool of liquid matters without much pain or uneaſineſs; but when there is an evacuation of ſlimy matter, ſometimes bloody, attended with febrile affections, ſevere gripings, nauſea, or ſickneſs, and frequent propenſity to go to ſtool; with very ſmall evacuations from ſuch efforts, it is called DYSENTERY, DYSENTERIA, from *dus*, malè, and *enteron*, inteſtinum, inteſtine.

When the diſeaſe is very acute, attended with a continual vomiting of bilious matter, and at the ſame time a violent looſeneſs, or at leaſt a nauſea, and ſtrong propenſity to go to ſtool, with loſs of ſtrength, and very often cramps of the thighs and legs, it is called CHOLERA MORBUS, from *kolè*, bilis, bile.

When there is a frequent purging of bloody ſerum, as if raw fleſh had been waſhed in ſome liquid, *ſuppoſed* to flow from the liver, it is called INDOLENT, becauſe unat-

unattended with any ſevere pain, great ſickneſs, or remarkable loſs of ſtrength—this evacuation is therefore named HEPATIRRHOEA, from *epar*, jecur, the liver, and *reo*, fluo, to flow.

If there is a frequent purging, in which the aliments appear ſcarcely to be changed by the digeſtive powers, and comes on immediately, or ſoon after eating, it is termed LEIENTERIA, from *leios*, lævis, ſmooth or ſlippery, and *enteron*, inteſtinum, inteſtine.

Should there be a frequent evacuation of *white matter*, ſuppoſed to be chyle, it is termed COELIACA, from *koilia*, venter, the ſtomach, or firſt bowels, where the firſt digeſtion takes place, and forms chyle, which chyle is ſuppoſed to give the appearance from whence this diſeaſe is nominated.

If of black matter, or of a deep red colour, is then called MELÆNA, from *melas*, niger, black, unattended with any putrid ſmell, ſudden deprivation of ſtrength, or remarkable degrees of pain, or nauſea.

However, it will be ſufficient to take notice only of two of theſe, as the reſt may be cured by the ſame means made uſe of in ſome of the ſtages.

§ 1. CHOLERA MORBUS, OR BILIOUS, VOMITING, AND INTESTINAL FLUX.

The ſeat of this complaint ſeems to be the whole inteſtinal canal, particularly the ſtomach, head of the duodenum, (43.) and ductus communis choledochus, the common duct of the gall bladder. (32.)

And it is apt chiefly to attack ſuch as are of bilious, dry, choleric habits, or whoſe conſtitutions are loaded

with ſcorbutic acrimony, or the firſt paſſages with acid humours, or are of iraſcible diſpoſitions.

DESCRIPTION. Though this diſeaſe will ſometimes come on very ſuddenly, it is often preceded by heart-burn, a gnawing, painful ſenſation of the ſtomach and bowels, and rancid eructations—after which ſucceed enormous vomitings, and inteſtinal diſcharges of vitiated humours, bilious, green, yellow, and ſometimes black, with great difficulty and pain—there is alſo a violent pain and diſtenſion of the belly and inteſtines, accompanied with thirſt—a pulſe at firſt full, ſtrong, and frequent, afterwards weak and irregular—heat, and anxiety—moreover, there attends a nauſea extremely troubleſome—ſometimes a contraction of the legs and arms—an acute pain above the navel—retention of the urine—fainting—coldneſs of the extremities—the body becomes weak, and the ſpirits low—with other ſymptoms of a ſimilar nature, which greatly terrify the attendants, and will deſtroy the patient in forty-eight hours.

This diſeaſe generally makes its appearance in autumn, more eſpecially after a hot and dry ſummer.

If the diſeaſe is more than commonly violent, the evacuations downwards are very numerous, amounting in the ſpace of a few hours to ninety or a hundred—the patients ſoon become emaciated and reduced—and the ſymptoms above ſpecified are quickly followed by hiccough—univerſal convulſions—cold ſweats—frequent ſwoonings—and either in one of theſe fits, or in a convulſed ſtate, when the diſeaſe proves fatal, they expire.

CAUSES.

CAUSES. The *remote* or *inducing* are, eating of pork, bacon, fat meat fried in oil or butter—or ſweets, grapes, cherries, cucumbers, melons, or all ſuch viands as become readily rancid or acid—poiſons—ſtrong purgatives—violent rage—and acrimonious bile.

The *proximate* or *immediate*, conſtrictions of the ſtomach and ſmall inteſtines, particularly the duodenum, by bilious or acrimonious humours irritating and vellicating the ſenſible nervous coats, which cauſe an increaſe of action in theſe organs, producing different ſymptoms, according to the parts locally or ſympathetically affected.

CHARACTERISTIC SIGNS. An acute diſeaſe, attended with the vomiting of ſome humour, moſtly bilious or acrid matter, at the ſame time a frequent inteſtinal evacuation, or at leaſt a nauſea and teneſmus, or frequent deſire to go to ſtool, accompanied with anxiety, abdominal pains, or gripings, and very often ſpaſmodic contractions of the legs.

CURE. The indications are, to ſheath, dilute, and expel the acrimonious humours, take off the convulſive affection; afterwards to reſtore ſtrength and activity to the ſtomach and inteſtines; and theſe are done, firſt, by drinking freely of weak chicken water, made by boiling a chicken in three gallons of water, ſo that the decoction juſt taſtes of the fleſh—large draughts of which ſhould be taken, and given in glyſters till the whole is conſumed—about three or four hours after which an opiate, (No. 4.) may be given; and this mode, if at firſt made uſe of, will generally complete the cure.

Or, very weak beef or mutton broth, diveſted of fat —or milk and water—freſh butter—milk—decoctions of rice or barley—or infuſions of oaten bread, toaſted and made brown like coffee—or wheat-bread, or oat-meal toaſted may do, where chicken-broth cannot be had—indeed the infuſion of the oaten bread has been preferred by ſome, as it has been obſerved to ſit eaſieſt on the ſtomach, and never vomited up.

But ſhould the patient have been purged for ten or twelve hours before aſſiſtance has been given, an opiate ſhould be adminiſtered during the urgency of the ſymptoms, and the doſes large and repeated, approportioned to the violence of the diſeaſe.—SYDENHAM gave twenty-five drops in an ounce of cinnamon-water, and that proving inefficacious, in half an hour the doſe was increaſed, and repeated at ſuch intervals as gave room to ſuppoſe the effect of the former doſe had ceaſed, before the ſucceeding one was adminiſtered—and after the ſeverity of the diſeaſe abates, the opiate ſhould be repeated night and morning, till the ſtrength and ſpirits return.

In common caſes this will be ſufficient; but if the patient is of a *full, ſanguinary habit, bleeding* is immediately neceſſary—ſhould the pains of the ſtomach and inteſtines be extremely violent, partial warm baths, or local fomentations of the ſpirituous kind, may be had recourſe to, and camphorated and volatile liniments, (No. 107. 132.)

Should, after copiouſly waſhing the ſtomach with ſome of the diluting liquids, the affection of the ſtomach

ſtill

ſtill continue, the fermentative ſaline draught, (No. 59.) may be exhibited; or the infuſion or powder of columbo-root, ten or fifteen grains to a doſe, at proper intervals, which is often an effectual remedy—cataplaſms of mithridate,* Venice treacle,* or opiated confection, or the leaves of common mint bruiſed, boiled in port, may be applied to the pit of the ſtomach and wriſts—and mint tea, or weak infuſions of cloves or cinnamon, may be taken occaſionally.

In caſes of great heat and internal uneaſineſs, nitre is recommended—from thirty grains to ſixty of powdered columbo-root, from the firſt, taken every three or four hours, have been ſaid in three or four days to have completed a cure—indeed, in hot climates, it has been eſteemed almoſt a ſpecific.

After waſhing the ſtomach extremely well, in ten or twelve hours that organ ſettles, opiates then given in a liquid, or ſolid form, as beſt agrees, are requiſite to allay the diſturbance which has been created in both the nervous and vaſcular ſyſtems; which muſt be continued at bed-time; and, in about three or four days, a doſe of rhubarb may be proper, and, at night, an anodyne.

Should the appetite be left weak, a draught of the infuſion of quaſſia wood, with a few drops of dilute vitriolic acid, may be given twice a day, or ſome other bitter infuſion, (No. 63 to 65.)—and the patient ſhould return gradually to the common mode of living.

* Edinburgh New Diſpenſatory, 1789.

The mode of treatment here recommended is proper in this complaint ariſing ſpontaneouſly, or from an epidemic cauſe.

But when it originates from food got into a ſtate of fermentation and corruption, beſides plentiful dilution, with watery and mucilaginous liquids, we muſt have recourſe to emetics and aperients, (253. 260, &c.) (as ipecacoanha, emetic tartar, caſtor oil, rhubarb, &c.) and afterwards warm bitters and tonics, and corroborants, with aromatics. (No. 61 to 65.)

If it is brought on *by ſtrong emetics and purgatives*, warm ſedatives are neceſſary, to allay the agitation of the bowels and ſtomach, (No. 113.) ſpirituous fomentations and volatile camphorated liniments, (No. 107. 132.) afterwards, to alleviate the uneaſineſs occaſioned by the violent action of the emetics and purgatives.

If *violent anger* ſhould be the cauſe, emetics and purgatives are to be avoided; nor muſt cold water be given immediately afterwards, as we ſhould run the riſque of bringing on an inflammation of the ſtomach —the acrimony of the bile we muſt endeavour to correct, by proper abſorbents, (296.) united with nitre, (No. 2.) diluting and ſheathing it with mucilaginous and watery liquids, as barley-water, thin gruel, bran tea, decoctions of hartſhorn ſhavings, and ſuch like lubricating and emollient drinks—afterwards, when the hurry is over, it may be carried off by emetics and aperients.

If it deduces its origin from *acrimonious irritating poiſons taken internally*, we muſt depend upon filling the ſtomach

ſtomach and inteſtines with oily and mucilaginous liquids, to guard them from the effects of their ſtimulus—abſorbents added to theſe liquids are ſaid to render them more efficacious—or alcaleſcent ſubſtances, (297.) well diluted, might be ſerviceable, if the poiſons had been of the ſaline kind, for reaſons advanced in inflammations of the ſtomach from the ſame cauſe. (534.)

§ 2. Dysentery, or Tenesmodal, dysenteric, intestinal Flux.

When this diſeaſe is epidemic, it ſeizes indiſcriminately all claſſes of people—but thoſe in general are moſt ſubject to it who are of bilious conſtitutions, (75, 76.)—who feed on corrupted diet, unripe fruit, and drink fermenting liquids—and who expoſe themſelves to the moiſt night air, after being in the day-time much heated by the ſun. It is moſt rife in ſummer and autumn, when damp cold nights ſucceed hot weather.

It is not only infectious but contagious; becauſe it has been known to be occaſioned by the ſmell of dyſenteric fæces, and from having recourſe to the ſame cloſe-ſtool after people labouring under dyſentery, and alſo from the nurſe's milk, under ſimilar circumſtances.

DESCRIPTION. This diſeaſe is generally uſhered in by a general laſſitude and chillneſs, with a loſs of appetite for ſome days, which are ſucceeded by great degrees of heat — reſtleſſneſs — nauſea —vomiting— heart-burn—and uneaſineſs at the pit of ſtomach—

thirſt—and a quick pulſe—excruciating pains then ſeize the belly, which occaſion a frequent evacuation from the inteſtines, but ſmall in quantity—the mattter evacuated is either mucous, thin, and ſerous, bloody, frothy, and often mixed with thin ſkin-like, or filamentous ſubſtances—the bowels are loaded with wind, which rolls about, and makes a conſiderable noiſe—and the patients are perpetually deſirous of going to ſtool—have a ſtrangury, and often a ſlipping down, or proturſion of the lower part of the rectum, (46.)—the loſs of ſtrength becomes extreme—and whilſt the extremities are cold, they perceive in the interior parts great heat—then ſoon come on a hiccough, and cold ſweats.

At length the pain ſuddenly ceaſes—the fæces, extremely offenſive, paſs away involuntarily—the pulſe becomes weak—the thirſt goes off—and, whilſt the unhappy patient is flattering himſelf with the hopes of recovery, from the apparent alleviation of the ſymptoms, he ſuddenly expires.

This diſeaſe, notwithſtanding it is often fatal to adults, but moſt of all to ſuch as are much advanced in life, ſtill in infants it is very mild; for they will be affected with the ſame diſeaſe for ſome months without any inconvenience, if it is left to the direction of nature.

Though the general progreſs of the diſeaſe is here deſcribed, practice demands us to make ſome neceſſary diſtinctions.

If the dyſentery is of the INFLAMMATORY KIND, there will be a high degree of fever—hard full pulſe—

extreme

extreme pain of the belly, which, on handling, increaſes, and, after vomiting, is ſtill more diſtreſſing—the head aches—the countenance is flushed—ſometimes the belly is diſtended—in quantity the evacuations are ſmall.

If of the PUTRID KIND, there will be a bitter taſte in the mouth—ſhiverings now and then come on, as it purſues its courſe—the feveriſh affections are ſlight—the face pale—the evacuated matter variouſly coloured—beſides which, a bilious vomiting, ſometimes accompanied with worms, is an aſſociate.

If of what is termed the MALIGNANT SORT, which it may be from the very beginning, or occaſioned by the milder ſort degenerating from conſtitutional defect or miſmanagement—the pulſe is then weak—the ſtrength fails ſuddenly—the countenance has a cadaverous aſpect—the voice is weak—the head heavy—there is great oppreſſion at the pit of the ſtomach, attended with ſlight convulſions, ſickneſs, and frequent fainting—and, now and then, eruptions of different kinds make their appearance, ſuch as thoſe of the miliary claſs, ſpots like flea-bites, and thruſh.

CAUSES. It is ſuppoſed to ariſe from acrimonious matter of a putrid nature; becauſe it makes its ear-ance in moiſt warm ſeaſons, adapted to generate putreſcency, chiefly attacks thoſe of ſcorbutic habits, (77.) and originates from vapours of putreſcent blood; particularly becauſe it ſoftens and corrupts the parts affected, generates air very copiouſly, and renders the fæces highly putrid; and alſo becauſe, on the diſſection of bodies dying

dying of this complaint, the inteſtines, eſpecially the colon and rectum, (45. 49.) are preternaturally thick, diſtended with air, inflamed, ulcerated, and in a mortified ſtate—the inner or villous coat abraded—the bile greeniſh like a leek, viſcid, and often of a black colour—and the blood very dark in appearance.

CURE. Of whatever nature this diſeaſe may be, the indications are ſimilar, and depend upon evacuating the acrimony, or determining it to other places—weakening its action—alleviating the diſtreſſing ſymptoms, by rendering the inteſtines leſs ſenſible to its irritating effects, in its FIRST STAGES—in the LAST, recovering the tone, and giving ſtrength to the relaxed and weakened veſſels.

To promote theſe purpoſes, in full habits, where there are apparent ſymptoms of inflammation, the patient ſhould be bled once or twice, according to their urgency, and the ſtrength of the patient.

In the next place, the ſtomach and inteſtines ſhould be unloaded by emetics and cathartics—twelve grains of powdered ipecacoanha, and one of tartarized antimony, ſhould be well mixed together, and divided into three parts, and one given every ſecond hour—no liquid ſhould be taken after the firſt doſe; but after the third, weak beef tea, or chicken broth, ſhould be drank liberally to encourage the vomiting—after which a ſlight opiate will be requiſite.

Should the emetic produce ſmart evacuations upwards and downwards, the ſucceeding day it is not neceſſary to order any thing except a grain of opium,

mixed

mixed with three or four grains of ipecacoanha into pills, with ſyrup of white poppy heads, and given at bed-time.

But ſhould the emetic not have produced any purgative effects, a purging powder, made of thirty grains of rhubarb, and three of calomel, muſt be adminiſtered the morning following.—As for my own part, in the beginning of this complaint, I prefer the oil of caſtor emulſion, (No. 66.) as it relaxes the coats of the ſtomach, ſheaths the acrimony, produces evacuations, and mitigates the pains of the bowels.

But as is the nature of the diſeaſe, ſo ſhould be the election of our purgatives—if of the *inflammatory kind*, the ſalines are preferable, (265.)—if of the *putreſcent*, the antiſeptic, as tamarinds, cream of tartar, &c. (No. 23, 24. 50, 51.); but in every caſe, after the effect is produced, an opiate ſhould be adminiſtered at night.

In the intermediate ſpaces of time, ſmall doſes of nitre, accompanied with antimonials and ſaline mixtures, may be exhibited, joined with ſheathing medicines, ſuch as gum tragacanth, arabic, ſtarch, if the fever keeps up—or ſhould it be of the *low malignant*, gentle cordials are proper.

However, ſhould not the diſeaſe ſoon yield to this mode, but the ſymptoms ſtill continue, particularly griping and purging, ſmall doſes of ipecacoanha may be given, ſufficient only to create a nauſea, (No. 133.) increaſing or decreaſing the doſe agreeable to the effects, and joining it with antiſeptics, cooling, or cordial medicines, as the particular nature of the caſe may require.

Should

Should the ſtools continue remarkably viſcid and offenſive, every ſecond or third day a purgative ſhould be given, and at night an opiate.

We muſt proceed in this manner, till, from the regularity of the pulſe, the ceſſation of pain, and propenſity to ſtools, as well as from the want of them, we may conclude the diſeaſe terminated—but ſhould not theſe appearances occur in the courſe of a few days, we have reaſon to apprehend the greateſt danger---we muſt then, if the ſymptoms continue as violent as at firſt, have recourſe to fomentations, (No. 111.) and glyſters of the ſheathing and anodyne ſort, made of milk, broth, marſh-mallow or linſeed decoction, with ſtarch and tincture of opium.

Beſides the ipecacoanha, other medicines are recommended, and, if we believe the recommendation, falling little ſhort of *infallibility*, viz. form two to ten grains of cerated glaſs of antimony, from ten to fifteen grains of powdered columbo every three or four hours—the decoction of ſemirauba bark is conſidered as a *ſpecific*, and ſaid to remove the diſeaſe without the danger or inconveniencies attendant on aſtringents. (No. 134.)

At the cloſe of the complaints aſtringents are uſeful, particularly tonics; and, indeed, alſo when the more violent ſymptoms of fever, pain, and teneſmus have ceaſed, to relieve the relaxed ſtate of the veſſels.

In purſuing the modes here laid down, we ſhall ſeldom fail of curing this complaint; but ſhould it be accompanied with a putrid malignant fever, there will be little hope of a recovery—however, we ſhould try the effects of ANTISEPTICS, (299 to 301.) particularly wine,

wine, infuſions of bark and ſnake-root, with a few drops of tincture of opium in each doſe, and the free uſe of ſubacid fruits, (299.) taken by themſelves, or ſqueezed plentifully into other liquids—indeed, fruit, and things of a ſimilar nature, will form, in theſe caſes, the proper plan of diet—but when dyſenteries are unattended with any high degree of putrefaction, decoctions, and jellies of rice, ſago, tapioca, ſalep, the white decoction, chalk mixture, weak chicken-broth or beef-tea, are moſt proper—though all ſolid animal food muſt be avoided.

When flatulencies become diſtreſſing, which will ſometimes be the caſe, chamomile flower tea, infuſion of cinnamon or cloves, or liquids impregnated ſlightly with other aromatics, may be occaſionally adminiſtered with great advantage.

However, we have had inſtances of ſome of theſe complaints which were epidemical, and from their nature ſo extremely deſtructive, as exceeded the powers of medicine, ſuppoſed to be owing to their deducing their origin from acrimonious humours, highly cauſtic—in which a total loſs of ſtrength, ſwelling of the belly, ſinking of the pulſe, a diſcharge of blackiſh ſtools, and clammy ſweats, were certain ſigns of the irremediable ſtate of the diſeaſe.

With reſpect to the COMMON DIARRHOEA, if it is unattended with any weakneſs, loſs of appetite, or febrile affections, and is moderate in quantity, it very often is of ſervice to the conſtitution, and is rather conducive to health than otherwiſe; but ſhould it run on to too great exceſs, it will require the ſame means for its

its cure, and will be conquered much more eaſily than the dyſentery—and, indeed, all the other ſpecies we have ſpecified require the ſame treatment---at the beginning clearing the firſt paſſages of any irritating contents, by proper emetics and cathartics; next ſoliciting the flow of fluids to the ſurface by diaphoretics, and ſtrengthening the ſtomach and bowels by tonic aſtringents, bitters, ſtrengthening medicines, and *particularly* riding on horſeback, at the cloſe of the complaint.

With regard to the HEPATIRRHOEA, we muſt proceed as adviſed in that diſorder called tabes hepatica, or hepatic conſumption. (529. 531.)

CHAP. II.

HÆMORRHAGES,

FROM the Greek words *aima*, ſanguis, blood, and *rennumi*, erumpo, to break out, or

SANGUINARY EVACUATIONS.

All thoſe effuſions of blood are conſidered as morbid, which either flow from particular parts not naturally accuſtomed to produce ſuch evacuations; or, though producing them periodically, ſtill afford them in too great quantity, or return at too quick periods, that the machine, by theſe means, is ſo injured, as to experience ſome defect in executing its functions

properly, and conſequently falls into a diſeaſed ſtate, attended with a greater or leſs degree of danger, according to the violence of the effuſion, or to the conſequence of the part from whence it flows.

Now all hæmorrhages ariſe, either when the circulatory propulſive powers are increaſed to a great degree of violence; or that the reſiſtance of the blood on its part and the veſſels ſhould be diminiſhed; or that each of theſe things ſhould happen at one and the ſame time.

Hence, then, we find, that complaints of this nature may be occaſioned in four different ways---by the veſſels being ruptured, dilated, or eroded; or, by the blood having loſt its natural viſcidity, and becoming too thin---under any of theſe circumſtances, the veſſels not being capable of confining the blood within its proper channels, occaſion hæmorrhage---whence ariſe a variety of theſe complaints, taking their names from the places from whence the blood iſſues; or the action of the parts producing, inſtead of their natural, theſe ſanguinary diſcharges.

Hence BLEEDING OF THE NOSE, named EPISTAXIS, from the Greek word *epiſtazo*, ſanguinem e naſibus ſtillo.

SPITTING OF BLOOD---HÆMOPTYSIS, or HÆMOPTUON, from *aima*, ſanguis, blood, and *ptuo*, to ſpit.

VOMITING OF BLOOD---HEMATEMESIS, *aima*, ſanguis, and *emeo*, to vomit.

MAKING BLOODY URINE --- HÆMATURIA, *aima*, blood, and *ouron*, urine.

PILES

PILES---HÆMORRHOIDS, *aima*, ſanguis, blood, and *rheo*, fluo, to flow.

MÆNORRHAGIA, *mene*, menſes, and *rheo*, to flow.

In all morbid effuſions of blood, from whatever place they iſſue, we endeavour to find out the proximate or acting cauſe before enumerated, and form the modes of cure accordingly;---but as effuſions of blood from the lungs is of moſt dangerous nature, we ſhall ſelect that, in order to point out the particular mode of proceeding, and occaſionally advert to what deviations may be neceſſary on account of the difference of ſituation of the part affected.

§ 1. SPITTING OF BLOOD, OR HÆMOPTYSIS.

All morbid effuſions of blood through the mouth take this general name, except that which is vomited up ---and this appellation we think improper---if blood comes from the gums or throat, or drops from the ſuperior part of the noſe internally into the ſuperior part of the fauces, it may be right; for the effuſion externally will only be attended with a ſpitting, ſlight cough, or hawking; but, when from the lungs, the cough is more conſiderable—we ſhall therefore diſtinguiſh the complaint of which we are about to treat, by the term,

§ 2. COUGHING UP OF BLOOD.

DESCRIPTION. In this complaint, for the moſt part, a chillneſs—laſſitude—coldneſs of the feet—difficulty of breathing come on—a weight, or undulating ſenſation is felt about the diaphragm—flatulence in the

belly---and pain in the back—at length there comes on a tickling and itching in the windpipe, from whence iſſues forth blood—if it is recent, the colour is florid, the fluid frothy, and coughed up in large mouthfu'ſ—but it is not always of a very florid colour—in ſome caſes it is of a blacker hue, as it remains and concretes more or leſs in the veſicles.

From the ſymptoms here enumerated it appears, that a ſpaſm of the whole machine takes place before the effuſion.

CAUSES. The *remote* or *inducing* are ſaid to be, a fullneſs of blood, brought on by ſome accuſtomary evacuations being impeded, if, at the ſame time, the action of the veſſels ſhould be ſtrongly increaſed by anger—violent motion—living upon too hot food or liquids—or violent cough—ſhould the exertions in protruding the fæces in coſtive habits be too powerful —long expoſure to ſevere cold, cauſing a contraction on the ſurface of the body and the external veſſels—air poſſeſſing too much levity in very high ſituations—a ſuppreſſion of the menſes or piles—too great a rarefaction of the blood—ſpaſmodic contractions of ſome of the viſcera—ſcirrhous obſtructions in the neighbouring viſcera—or a ſcirrhus or polypus in the veſſels of the lungs themſelves—or, in fine, whatever determines too large a quantity to the lungs, and cauſes it to circulate too forcibly againſt the veſſels which are not obſtructed—or ſome diſeaſes which break down the texture of the blood, or erode the veſſels, as ſcurvy, pulmonary conſumption, ſmall-pox, or thoſe depending upon a putreſcent acrimony of the fluids.

Thoſe which are *proximate* or *immediate* we have before enumerated, (622, 623.)—but moſt commonly it is a rupture of the veſſels, preceded by an univerſal ſpaſm.

CHARACTERISTIC SIGNS. A fluſhing of the cheeks—ſenſation of uneaſineſs, or pain, and ſometimes heat in the breaſt—a tickling of the fauces—cough—and throwing up of florid-coloured blood, often frothy.

People moſt ſubject to this complaint are thoſe of ſlender, delicate frames—who have long necks—are narrow cheſted—whoſe blood is acrid and copious, and are between twenty-five and thirty years old.

CURE. This diſeaſe is always to be conſidered of a very dangerous nature, and requires very early and effectual aſſiſtance—in doing which, we muſt endeavour to ſolicit the blood from the lungs, moderate its heat, take off the external ſpaſmodic affections, and heal the veſſels, if ruptured.—If then it proceeds from too great fullneſs, we muſt have recourſe to bleeding, in proper quantities, and at ſuch intervals as the neceſſity of the caſe demands—all animal food muſt be prohibited, even the weakeſt broths—*and the diet ſhould be by no means nutritious,* but ſhould chiefly conſiſt of vegetable juices, ſuch as boiled turnips, apples, oranges, panada, thin gruels, ices, and ſuch ſimple materials—*the liquids allowed* ſhould be nitrated emulſions, Seltzer water with milk, or barley-water, thin whey, or toaſt and water drank cold—the body ſhould be kept at perfect reſt, ſeldom in a recumbent poſture, nor ſhould the patient be allowed to ſpeak, ſcarce at all;

nor

nor, indeed, ſhould any thing be permitted that can in the leaſt increaſe the motion of the lungs—opiates ſhould be exhibited now and then, if neceſſary, to procure reſt, and the body kept open by glyſters, (No. 25, 26.) or gentle cooling aperients, (264, 265.) that the blood may not be impeded in its circulation downwards.

The mind of the patient ſhould be kept perfectly at eaſe—and the firſt and ſecond bleeding ſhould be copious, from large orifices, and quickly repeated, if the violence of the caſe requires it—for one free bleeding in this ſtage is of infinitely more ſervice than a number of ſparing ones.

Nitre ſhould be given freely in any eligible form, as it is much to be depended upon; for it leſſens the motion of the blood, and allays its heat, conſequently prevents ſtrong vaſcular action, and the expanſive power of the the blood.

Keeping the body open with cooling aperients, (264, 265.) particularly Glauber's ſalts largely diluted, (No. 135.) is extremely uſeful, taken now and then, till the effect is produced twice, or oftener.

Should the cough be very troubleſome, ſome of the oleaginous medicines, (No. 81 to 84.) to which nitre may be added, and given to allay the pulmonic irritation.

This method in common and recent caſes will almoſt always ſucceed; but when it proceeds from previous injury in the texture of the blood, and weakneſs of the lungs, conſtituting that kind which is habitual or

conſumptive, little can be expected from bleeding; for this, by weakening the ſyſtem, and contributing more to diſſolve the texture of the blood, ſeems rather calculated to increaſe the miſchief, inaſmuch as it adds power to its cauſes; ſmall doſes of antimonials, (278.) or ipecacoanha, (278.) are moſt likely to produce good effects, by determining the flow of blood to the ſurface, and demulcents, (291.) by adding to the viſcidity of the fluids.

And ſhould the pain, difficulty of breathing, and cough, ceaſe with the efflux of blood, we may give tonic medicines, as decoction of bark, (300.) to which may be added the balſam of capivi, (253.) or ſome of the mild balſamic claſs; for we may reaſonably infer, that there is no more extravaſated fluids in the pulmonary veſicles.

But it ſometimes happens unfortunately, notwithſtanding all our efforts, that though the efflux of blood may be ſtopped for a few hours, or days, it will return with a quick hard pulſe, troubleſome cough, oppreſſion, and difficulty of breathing, then we have reaſon to be alarmed, and fear a ſupervening conſumption—in this caſe we have little to depend upon but general remedies, ſuch as goats whey, aſs' milk mixed with Seltzer water—or the waters of Briſtol ſhould be had recourſe to—riding, ſwinging, ſailing, and a milk diet; for ſome have, by theſe means being rigidly purſued, happily recovered.

Slight vomits may alſo be given three or four times a week, early in the morning, merely to give two or three

three motions—three or four grains of ipecacoanha is ſufficient and fully adequate to anſwer ever uſeful purpoſe.

§ 3. Bleedings of the Nose

are not commonly attended with much inconvenience, and generally yield to topical applications—which may be had recourſe to, if the pulſe becomes weak and ſmall, the cheeks and lips loſe their natural colour, and the extremities be ſeized with unuſual coldneſs—the common remedies are ſmelling at vinegar, or ſolutions of white vitriol, applying doſils of lint by themſelves, or loaded with ſome ſtyptic, as ſtyptic tincture, alum, &c. cold wet cloths, or cold iron applied to the nape of the neck.

But when the affection is accompanied with any great increaſe of vaſcular action, which will be attended with a ſtrong, quick, full pulſe, heat, head-ach, and other ſymptoms, indicative of too ſtrong vaſcular power, we muſt have recourſe to bleeding, and ſuch remedies of the cooling kind as we have adviſed, (626, &c.)—but ſhould vaſcular debility, or the blood being in a looſe diſſolved ſtate, be the cauſe, we muſt depend upon aſtringents and tonics, particularly bark and the vitriolic acid—creating nauſea and gentle vomiting is recommended, as adviſed, (628.)—if by theſe means a period is put to the hæmorrhage, the body ſhould be kept in a ſtate of perfect quietude—if coſtive, aperients and glyſters ſhould be exhibited, and a paregoric ſhould be given at night.—And as almoſt all active

hæmorrhages ariſe from too great plentitude, occaſioned by the ſuppreſſion of ſome natural diſcharge, particularly in young full habits—in older conſtitutions, which are ſupported by plentiful, or more copious diet—whence they are preceded by pain and fullneſs of the head, occaſioning drowſineſs—in order, therefore, to form a preventive plan, abſtinence is neceſſary, keeping the head cool, the body open, making the ſlighteſt ſuppers, and thoſe of the moſt light and refrigerating diet; but they are altogether better avoided.

§ 4. VOMITING OF BLOOD, OR HÆMATEMESIS. (623.)

The characteriſtic marks of this diſeaſe are, frequent nauſea, or efforts to vomit, and at the ſame time a rejection of bloody materials by the mouth, mixed with ſuch as have before been ſwallowed—from whence the ſtomach feels ſome alleviation; but the blood vomited up is grumous—and the ſtools which ſucceed afterwards are black.

This affection, however, is more common to women than to men, and leſs frequent in both than the making of bloody urine.—If a woman in this diſeaſe ſhould menſtruate, ſhe is cured; for it often is occaſioned by a ſuppreſſion of the menſes—and in men, from an obſtruction of the bleeding piles, and alſo from infarction of the liver and ſpleen—ſtill it may be occaſioned by other cauſes; ſuch as full and free living—ſwallowing down conſtantly large quantities of ſucculent or juicy food, at the ſame time indulging in indolence—and the blood puſhed forwards in the courſe of circulation

lation too rapidly, by ſevere exerciſe, running, riding, fits of anger, and the too free uſe of vinous and ſpirituous liquors.

CURE. In theſe caſes, though bleeding may be ſometimes neceſſary, it muſt be cautiouſly repeated—we muſt be governed by the ſtrength of the patient, which is ſometimes apt to fail ſuddenly—the pulſe very readily flags;—the ſanguinary flux is apt to be extremely copious, and often occaſions fainting.—Nor ſhould any thing be given that is likely, in the leaſt degree, to be offenſive to the ſtomach.—As therefore it is eſſentially neceſſary to have the body kept open, we muſt depend upon glyſters chiefly—though rhubarb in ſmall doſes, *if the ſtomach will bear it*, has been recommended.

Weak broths, with ſome of the aſtringent vegetables unboiled;—ſuch as plantain—ground-ivy—cup-moſs—nettles—or rather their expreſſed juice, may be be given—infuſion of red roſes—ſloes—or cold water,—acidulated with the vitriolic acid—may be adminiſtered as drink—alſo ices—and at night gentle opiates, mixed with aſtringents of the milder claſs;—avoiding all thoſe which are likely to create nauſea—ſuch as alum, white vitriol, &c.

In all the different ſpecies of this complaint it will be neceſſary to proceed in this manner.—But if the ſuppreſſion of the menſes, or of the bleeding piles, ſhould be the cauſe—theſe are to be ſolicited to their natural paſſages by proper means—or ſhould they ariſe from affections of the liver, or ſpleen, ſuch medicines ſhould be exhibited as are calculated to relieve

them—as much as the ſtate of the ſtomach will permit.

But here we muſt obſerve, that in the middle of pregnancy, they are rarely injurious; but if in fever, they are always fatal,—if the blood be black and fetid; —nor ſhould we flatter ourſelves with much hope, if they proceed from enlargements of the ſpleen, or liver, and induration, or ſhould there be fainting to any degree of ſeverity.

§ 5. Bloody Urine, or Hæmaturia. (623.)

In this complaint, the matter paſſed through the urethra is either pure blood, or bloody urine, that is, urine having acquired intenſe redneſs from being mixed with ſome particles of blood.—The moſt common cauſes of which are ſtones, or gravel lacerating the different parts of the urinary paſſages—but it may be occaſioned by venereal exceſſes, as blood may iſſue from the ſeminal veſſels (two membranaceous cellular tubes, lying on each ſide, between the bladder, (57.) and rectum, (49.) on the outſide of the vaſa deferentia, (64.)—and alſo from the proſtate glands—(65.) hence are they conſidered amongſt the cauſes—as are alſo—diſſolution of the blood—or violent exertions of the circulatory powers, in ſevere inflammatory fevers, particularly in the ſmall-pox.

Whatever may be the cauſe, two points are to be conſidered—whether there is an *inflammatory*, or, *putrefactive* diſpoſition in the blood.

If the former is prevalent—and the habit full, we muſt bleed, and that repeatedly—till we have taken

off

off the general plenitude, and allayed the intenſeneſs of the action of the vaſcular ſyſtem—the bowels ſhould be kept open with ſaline purges and manna, (265.)—and emulſions with gum arabic, and cooling decoctions of linſeed tea mixed with nitre, ſhould be freely adminiſtered—and the uva urſi (211.) may be adminiſtered, which in this caſe I have ſeen extremely efficacious—other aſtringents are not adviſeable.

If the SECOND,—tonics—aſtringents—and balſamics—as bark—lime-water—tincture of roſes—alum-whey ſhould be had recourſe to, to reſtrain, as quickly as poſſible, the efflux of blood—and by continuing afterwards the uſe of the bark, joined with the balſam of capivi—drinking chalybeate waters—and uſing a milk diet, endeavouring to ſtrengthen the tone of the ſyſtem, and prevent a relapſe.

But without either of the conſtitutional tendencies above recited, ſhould the cauſe be a ſuppreſſion of menſes—or piles—and theſe cannot be reſtored or ſolicited to their natural paſſages—occaſional bleeding will be a ſalutary ſubſtitute.

Or ſhould it deduce its origin only from calculi, during the fits of pain we muſt guard the parts againſt the effects of their ſtimulus, by emollient and demulcent remedies, (213—290.)—æthereal ſpirits of nitre—and ſuch like—afterwards we muſt endeavour to ſtrike at the cauſe, as recommended in pain of the kidneys. (580.)

Here we muſt obſerve, that in all caſes of great pain, opiates ſhould not be forgot—eſpecially if ſtone or gravel is the cauſe—and, indeed, in diſcharges

from

from the ureters, and kidneys, the infuſion of carrot-ſeed (No. 123.) has not been ſlightly recommended.

But in all caſes of bloody urine—all powerful aſtringents ſhould be induſtriouſly avoided—leſt they ſhould produce too ſtrong a conſtriction of the paſſages, and from thence coagulated blood might be reſtrained, productive of inflammation, or forming a nucleus, or baſis for a ſtone.

Sometimes the urine will appear to be extremely high-coloured, as if blood was mixed with it—of this it is neceſſary to be certain;—which may be diſcovered by ſtraining the urine through fine linen—perfectly clean—if there ſhould be any admixture of blood, it will be ſtained of a red colour—if not, there will be no ſuch appearance.—And laſtly, great care ſhould be taken in properly diſcriminating between bloody urine, and ſanguineous diſcharges of a gonorrhœa, or clap—or from piles making their exit through the urinary paſſages;—and critical diſcharges ſhould be diſtinguiſhed from thoſe that are not.

§ 6. PILES, or HÆMORRHOIDS. (624.)

Theſe have been divided into the OPEN and BLIND—the *firſt*, when they are attended with an effuſion of blood—the *laſt*, when they give no ſuch appearance—or into *exterior* and *interior*, from their ſituation.

They are not always, however, to be conſidered as a diſeaſe—for they are a very ſalutary diſcharge—and ſometimes periodic—preventing a number of other complaints, which are apt to appear, on their being imprudently expelled, or ſtopped.—I have known people,

people, from this cauſe, labour ſometimes under a variety of internal affections, which have all vaniſhed on their re-appearance. To thoſe afflicted with gout—who are hypochondriacal—hyſterical—ſubject to complaints of the kidneys, or bladder—to ſciatic pains—aſthma—mental derangement, and ſome others, they are conſidered to be highly ſerviceable. Hence, whilſt they continue moderate, and appear to be a ſalutary effort of nature to relieve herſelf from ſome ſuperfluous load—there is no need of medical aſſiſtance. But if they are extremely and conſtantly painful, or pour forth a large quantity of blood, ſo that the patient periences great debility, and grows thin, they then may be conſidered as morbid.

Thoſe who are diſpoſed to become corpulent, eat, and drink freely;—whoſe habits are relaxed—coſtive—plethoric—from indolence, or any other cauſe, are moſt liable to this complaint;—beſides, ſtrong purges will alſo bring them on.—Theſe cauſes induce obſtruction in, inflammation, and ſwelling of, thoſe veſſels called hæmorrhoidal;—whence, about the anus, there will be livid, painful tubercles; from which frequently iſſue blood, which alſo ſometimes flows withou any viſible tumour, attended often with a load, and pain of the head—giddineſs—and pain of the loins and anus.

CURE. *When there is no efflux of blood, from the piles*; they are generally attended with ſuch great degrees of pain, that people are afraid of going to ſtool.—Under theſe circumſtances, if people are of full habits, bleeding, abſtemious diet, and mild aperients

—(No.

—(No. 3. 22 to 24. 66. 135, or 136.) to take off the fullneſs, and prevent coſtiveneſs, ſhould be had recourſe to,—after, warm olive oil may be applied to the part—or diluted preparations of lead (210.) with camphorated ſpirits, and lime-water;—juice of houſeleek—to any of which may be added tincture of opium. The patient ſhould, as much as poſſible, be kept in a recumbent poſture; and, when ſitting up, avoid preſſure on the parts—or heating them—for which purpoſe a chair, ſtuffed round the edges, with a vacuity left in the center, ſhould be uſed.

The diet ſhould be of the mild laxative, emollient kind,—nor any thing taken which can heat, or cauſe the blood to circulate with too great freedom.

When the piles are of the bleeding sort—and it becomes neceſſary to ſtop the flux of blood—cloths dipped in vinegar and water may be applied to the loins, and anus—which failing, or not ſoon ſucceeding—a gentle emetic may be adminiſtered, (No. 11.) and after the operation, the anodyne draught, (No. 4.)

In theſe caſes—the indications of cure are very obvious. To take off the ſuperincumbent preſſure from, and leſſen the action of the veſſels, towards the affected part; to ſtrengthen the tone of the veſſels relaxed;—and take off local irritation.

But as theſe diſcharges are brought on by infarctions and obſtructions of the liver, other things are neceſſary to be done, in order to prevent a relapſe; for under theſe circumſtances patients are liable to frequent returns;—hence, in order to remove the cauſes,

We muſt have recourſe to ſuch medicines and regimen as have been adviſed in pain of the liver from thoſe ſources.——(Page 577.)

Sometimes this diſeaſe will ariſe merely from want of ſtrength, and tone in the rectum, (49.)—Preparations of iron (210.) united with bitters, as quaſſia wood—gentian—chamomile—and ſuch like, and continued for ſome time, are highly beneficial,—and bathing the parts with a ſponge dipped in cold water, twice every day.—And in every ſpecies we muſt carefully avoid all aloetic aperients—for they are too apt to ſtimulate the rectum,—nay, rhubarb will ſometimes have this effect;—hence, as it is of the utmoſt conſequence to keep the body open, ſhould there be occaſion, and that moderately; for ſtrong purging will exaſperate, rather than alleviate, the complaint, the gentleſt aperients, (264, 265.) ſhould only be inſiſted upon, and thoſe given in ſuch quantities, and at ſuch intervals, as merely to keep the bowels empty.—This diſeaſe has been obſerved alſo to originate from exceſs of grief, long continued, as well as from a profuſion of the menſtrual diſcharge—and moſt probably is cauſed by a general relaxation of the ſolids, brought on by a torpid ſtate of the nervous ſyſtem; whence the fluids, deprived of proper circulation from the inactivity of the vaſcular propulſive power, form congeſtions, which fix in theſe parts.

Changing the ſcenes of life—travelling—diſſipating gloomy ideas by ſeeing new objects—and diverting the attention, are amongſt the beſt calculated remedies, in theſe caſes—which have been greatly aided by taking

taking four ſpoonfuls, three or four times a day, of bark infuſed in lime-water. (No. 137.)

Where the piles have continued a long time, occaſioned by a continued acrimonious looſeneſs, I have known them cured by gentle vomits—ſmall doſes of ipecacoanha in a ſtrong decoction of nettles and opiates—adminiſtering after the pain had ceaſed, and the looſeneſs perceptibly abated, bark joined with chalybeates.

CHAP. III.

ON FLUXES,

When the Serum or Lymphatic Part of the Fluids are evacuated in too copious Quantities.

ALL fluxes may be ſaid to be of the ſerous kind, which depend upon an evacuation of ſome of the ſecreted fluids, and are neither of the alvine nor ſanguineous claſs. In this place, however, we ſhall treat only of the

DIABETES,

from *diabaino*, permeo, to paſs through, or a

MORBID DISCHARGE OF URINE.

When, therefore, the evacuation of urine happens in ſuch quantities, be the colour or ſmell what it may, ſo as to bring on emaciation, or falling away of the fleſh—weakneſs—loſs of appetite, and thirſt, we may conſider it as a diſeaſe under this denomination.

DESCRIPTION. Beſides an unuſual flux of urine, it is accompanied with ſevere thirſt—the mouth is

clammy and dry—and the patients ſpit up frequently frothy ſaliva—they complain of heat in the viſcera—the urine is limpid, ſometimes ſweet, and has generally not an unpleaſant ſmell—there is a kind of fullneſs of the loins, teſticles, and feet—hectic fever—after which ſucceed a tabes, and death.

It ſeldom attacks young people, but thoſe advanced in the latter ſtages of life, who have been uſed to drink freely of vinous liquors, and employed in the ſeverer occupations.

CAUSES. The *remote* or *inducing*, preceding febrile diſeaſes, particularly if they are ſubdued by immoderate evacuations—too long continued uſe of acidulated waters, particularly in a cold climate, or diuretic medicines—alſo the bite of a ſerpent called DIPSAS, from the Greek word *dipſa*, ſitis, thirſt, becauſe it occaſions ſo great thirſt as often proves mortal.

The *proximate* or *immediate*, an increaſe of action of the ſecretory veſſels of the kidneys, ariſing from a ſtate of relaxation, and a thin acrid ſeroſity of the circulating fluids, and a too powerful determination of them to the kidneys.

CHARACTERISTIC SIGNS. A preternatural diſcharge of urine, immoderate in quantity, and of long continuance, attended commonly with loſs of appetite, emaciation, and hectic ſymptoms.

CURE. The indications are, to leſſen the action of the ſecretory veſſels, by altering their relaxed ſtate, and correcting the too great ſeroſity and acrimony of the fluids—hence we muſt apply to the uſe of inſpiſſants, diaphoretics, ſtimulants, and tonics—and as ſoliciting

liciting a flow of liquids to the ſkin will prevent too great a determination to the kidneys, in order to keep a free and conſtant ſtate of perſpiration, the patient ſhould wear a flannel ſhirt next the ſkin, uſe moderate exerciſe, and dry friction.

Alum whey is ſtrongly recommended, (No. 138.) four ounces to be taken at leaſt three times a day—lime-water drank alſo, whilſt the warmth in quenching continues, taken as freely as the thirſt requires, has been ſaid to exceed the uſe of Briſtol water, which by ſome has been conſidered as a ſpecific in this diſeaſe—half an ounce, or ſix drams of oak bark infuſed in two pints of lime-water, and the chalybeate waters, have had their powerful advocates.

White vitriol is an uſeful aſtringent, (210.) but ſome depend on half a grain of blue vitriol given twice a day in any proper liquid.

Preparations of iron, (210.) or elixir of vitriol joined with bark, (300, 301.) are no inferior tonics; and, by ſtrengthening the habit, contribute much in the promotion of perſpiration.

Rhubarb, (266.) has been recommended as efficacious in laying the foundation for the ſucceſs of anti-ſpaſmodics.

As a ſtimulant, tincture of cantharides, (271.) is by ſome in this caſe looked upon as a ſpecific.

Notwithſtanding the thirſt is a very diſtreſſing ſymptom, aqueous liquids ſhould be avoided—they ſhould be impregnated with ſome inſpiſſating ingredient, as comfrey-root, or made with lime; and theſe ſhould be uſed as common drink—boiled meat is leſs uſeful than roaſted—broth made of beef may be allowed—ſhell-

fiſh

fiſh—wild fowl—jellies in ſmall quantities, and often repeated—tapioca, milk, rice gruels, and ſuch ſimilar viands, may be permitted.

Opiates alſo at night will be ſerviceable given with ſome preparations of iron and diaphoretics. (No. 139.)

This diſeaſe ſometimes affects hyſteric patients, who paſs large quantities of limpid urine; hence it is called *hyſtericus* — ſometimes it ſupervenes intermittents; hence denominated *intermittens*—ſometimes it attacks people worn out by the gout, in whom, during the painful fits, the urine is ſmall in quantity, and turbid; but in the intervals of the diſcharge, from perſpiration being defective, becomes clear, watery, and copious.

To the general plan, which we have before laid down, we muſt therefore ſubjoin antiſpaſmodics, under the firſt circumſtance—under the ſecond, tonics, particularly bark—and under the third, invigorating cordials, agreeable to the ſpecific nature of the caſe. See HYSTERIA, INTERMITTENT FEVER, and GOUT.

Sometimes people will be affected with a morbid evacuation of ſweat, where that diſcharge is remarkable for its quantity, quality, and unſeaſonableneſs—this is called

§ 2. EPHIDROSIS, OR MORBID EVACUATION OF SWEAT.

from *ephidroo*, ſuderam movere, to occaſion ſweating; which is proportional to the quantity of perſpirable matter contained in the blood, to the velocity with which it is ſeparated, and to the heat or laxity of the pores of the ſkin—when it ariſes from an increaſed

circulation of the blood, it is active—when it depends upon the laxity of the ſkin, and ſuperabundance of ſerum, it is paſſive.

When the ſweat is *cold*, it denotes ſuperabundance of perſpirable ſerum, and a relaxed ſtate of the ſkin—when *warm*, velocity, and, at the ſame time, ſeroſity of the blood.

But when theſe profuſe ſweatings are connected with miliary, hectic, or other fevers, we are not to conſider the diſcharge as a diſeaſe which requires management particularly adapted to itſelf, we muſt endeavour to deſtroy or evacuate the ſeeds of the febrile affection, as by that means only can we conquer its conſequences; for in thoſe caſes the ſweating is purely ſymptomatic.

But when profuſe diſcharges of the ſkin come on without any evident cauſe or fever, flowing chiefly in the nights, and occaſions falling away of the fleſh, loſs of ſtrength and appetite, with lowneſs of ſpirits, it then requires medical aſſiſtance.

CURE. Here are indicated a diverſion of the flow of fluids, a decreaſe of their ſeroſity, and our endeavours to give general force and tone to the ſyſtem.

Hence purgatives, at proper intervals, will anſwer the firſt and ſecond indications—tonics and ſtrengthening medicines the laſt, ſuch as preparations of iron, bark, bitters, ſteel waters, moderate exerciſe, and the uſe of the cold bath—to which we would add, the frequent adminiſtration of milk.

Properly ſupporting, and judiciouſly increaſing the alvine diſcharges, are in this caſe extremely beneficial; for

for theſe divert the flow of fluids from the ſkin, as in the former caſe increaſing perſpiration ſolicited the humours from their determination to the kidneys.

When this complaint ariſes, as it ſometimes does, from a ſcorbutic acrimony, and the blood being in a looſe diſſolved ſtate, which is very often ſucceeded by that ſpecies of conſumption called ATROPHY—the ſweat pours forth in the middle of winter under the ſlighteſt covering, and at the ſame time affects the patients with reſtleſſneſs and anxiety; nor do they ceaſe till the vitiated humours are in a great meaſure diſcharged by this cuticular flux.

Here, as well as where the ſweats are of different colours, the remedies recommended are, the juices of freſh vegetables, ſubacid fruits, and the uſe of tonics, particularly bark.

THE FORMS OF MEDICINE

PRESCRIBED AND REFERRED TO IN MIXED, REMITTENT, INTERMITTENT, AND ERUPTIVE FEVERS---ALSO INFLAMMATORY, PAINFUL DISEASES, AND FLUXES.

No. 70. Bark Draught.

Take Decoction	} of Bark,	1 ounce.
Tincture		½ an ounce.
Powder		} of each 10 grains.
Extract		
Syrup of Quinces,		2 drams.

Mix.—

71. Infusion of Quassia Wood and Snake-root.

Take of Quassia Wood,	1½ dram.
Snake-root,	1 dram.
Boiling Water,	1 pint.

Infuse.---Dose. Four spoonfuls.

72. Oak Bark Bolus.

Take of Oak Bark in powder,	6 grains.
Alum,	3 grains.
Chamomile Flowers in powder,	8 grains.
Syrup, sufficient to form a Bolus.	

To be taken every third or fourth hour.---The Extract or Powder of the Scale Cup may be used in the same proportion---or the Pomegranate Bark, and Chamomile Infusion, (No. 60.) may be also exhibited.

No. 73. Bark Glyster.

Take of Bark Decoction, } of each 2 ounces.
Diſtilled Water, }
Extract of Bark, 2 drams.
Olive Oil, ½ an ounce.
Tincture of Opium, 8 drops.
Mix.---And let this be thrown up every fourth hour.

74. Bark Cream.

Take of Bark Powder, ½ an ounce.
Extract of the ſame, 2 drams.
Cream, 1½ ounce.
Sugar, 3 drams.
Mix.---Dose. Two or three ſpoonfuls every ſecond, third, or fourth hour, according to the exigencies of the caſe.

75. Astringent Draught.

Take Cinnamon Water, 1½ ounce.
Spirits of Cinnamon, 2 drams.
Electuary of Scordium, 1 ſcruple.
Syrup of White Poppy Heads, 2 drams.
Mix.---

or---76.

Take of Infuſion of Roſes, 2 ounces.
Spirit of Cinnamon, 2 drams.
Extract of Logwood, 10 grains.
Syrup of White Poppy Heads, 2 drams.
Mix.—Either of theſe may be given every three or four hours---or the quantities of theſe may be enlarged, and formed into mixtures, of which two or three ſpoonfuls may be adminiſtered occaſionally.

77. Astringent Opiates.

Take Infuſion of Roſes, 2 ounces.
Columbo-root powdered, 10 grains.
Tincture of Opium, 6 drops.
Syrup of White Poppy Heads, 1 dram.
Mix.—

or---78.

Take Infuſion of Logwood, } of each 6 drams.
Lime Water, }
Tincture of Catechu, 2 drams.
---------- Opium, 6 drops.
Syrup of White Poppy Heads, 1 dram.
Mix.—Either of theſe may be taken every fifth or ſixth hour.

No. 79. Calomel Powder.

Take Prepared Calomel, 2 ſcruples.
----------Crabs Eyes, 2 drams.
Tartarized Antimony, 1 grain.

Let theſe be rubbed well together, and ten or twelve grains adminiſtered for a doſe.

80. Purging Powder.

Take Rhubarb, } in powder, 6 grains.
Jalap, } 3 grains.
Ginger, 1 grain.

Mix.—

81. Oily Emulsion.

Take Oil of Sweet Almonds, 1 ounce.
Gum Arabic, 2 drams.
Fine Sugar, ½ an ounce.

Mix theſe well together, then gradually add

Decoction of Barley, 8 ounces.

Dose. Three or four ſpoonfuls often in the day.

82. Oily Linctus.

Take Oil of ſweet Almonds, 1 ounce.
Gum Arabic, 3 drams.
Syrup of Marſh-mallows, 1½ ounce.

Mix theſe well together. Dose. Two or three ſpoonfuls often in the day,---or, it may be acidulated with a few drops of dilute vitriolic Acid---or, an ounce of Syrup of Lemon may be added.

or---83.

Take of Oil of Sweet Almonds, 1 ounce.
Gum Arabic, 3 drams.
Syrup of Wild Poppy, 1½ ounce.
Dilute vitriolic Acid, which will give it a grateful acidity.

Mix.—Dose, as above.

84. Spermaceti Mixture

Take Spermaceti, (diſſolved in a proper quantity of Mucilage of Gum Arabic, or Yolk of an Egg,) } 1½ dram.
Cinnamon Water, 6 ounces.
Syrup of Wild Poppy, 1 ounce.

Mix.—Dose. Two table ſpoonfuls occaſionally.

No. 85. Discutient Fomentation.

Take of common Fomentation, 2 pints.
Crude Sal Ammoniac, 2 drams.
Common Vinegar, } of each 2 ounces.
Spirits of Wine, }
Mix.—

86. Camphorated Lotion.

Take of ſimple Lime Water, }
Common Vinegar, } of each 4 ounces.
Camphorated Spirits, }
Mix.—

87. Alterative Mercurial Pills.

Take Gum Guaiacum, 1 dram.
Calomel prepared, } of each 2 ſcruples.
Precipitated Antimony, }
Balſam of Capivi, ſufficient to form theſe into a maſs---and make of every dram twelve pills.

88. Decoction of the Woods.

Take Sarſaparilla, 3 ounces.
Guaiacum Wood, } of each 1 ounce.
Saſſafras Shavings, }
Boil theſe in three pints of water till they are reduced to two, adding towards the cloſe,
Liquorice-root bruiſed, ½ an ounce.
Then ſtrain it for uſe.

or---89.

Take Sarſaparilla, 2 ounces.
Bark of the Root of Mezereon, ½ a dram.
Boil theſe in the ſame manner as above, and add the liquorice.

90. Antiputrescent Lotion.

Take of Lime Water, 16 ounces.
Camphorated Spirit, 3 ounces.
Spirit of Sal Ammoniac, ½ an ounce.
Mix.---

91. Anodyne Eye Water.

Take Roſe Water, 2 ounces.
Tincture of Opium, 2 drams.
Mix.---

No. 92. Vitriolic Solution.

Take	Purified White Vitriol,	6 grains.
	Roſe Water,	2 ounces.
	Tincture of Opium,	30 drops.

Mix.---

93. Detergent Gargle.

Take	Decoction of Barley,	8 ounces.
	Common Vinegar,	1 ounce.
	Tincture of Myrrh,	½ an ounce.
	Honey of Roſes,	1 ounce.

Mix.---

94. Antiseptic Gargles.

Take	Tincture of Roſes,	8 ounces.
	Honey of Roſes,	6 drams.
	Tincture of Myrrh,	½ an ounce.
	Spirit of Sea Salt, ſufficient to create an agreeable acidity.	

Mix.---

95. Expectorant Mixture.

Take	Pectoral Decoction,	8 ounces.
	Ammoniacum Milk,	of each 3 drams.
	Oxymel of Squills,	

Mix.---

or---96.

Take	Acetated Ammonia,	2 ounces.
	Diſtilled Water,	5 ounces.
	Myrrh in powder,	40 to 60 grains.
	Nitre purified,	½ a dram.
	Vitriolated Steel,	15 grains.
	Balſamic Syrup,	6 drams.

Mix.---Dose. Three or four ſpoonfuls two or three times a day.

97. Saline purging Mixture.

Take	Epſom Salt,	6 ounces.
diſſolved in	Boiling Water,	1 pint.

Dose. Two or three ſpoonfuls every half hour.

98. Oily purging Mixture.

Take	Oil of Caſtor,	2 ounces.
	Diſtilled Water,	5 ounces.

Unite them with a proper quantity of the Yolk of Egg, or Mucilage of Gum Arabic, and then add

	Syrup of White Poppies,	½ an ounce.

Mix.---Dose. Two ſpoonfuls every ſecond hour.

or

or---No. 99.

Take of Oil of Sweet Almonds, 1 ounce.
Manna, 1 ounce.
Rochelle Salt, 6 drams.
diſſolved in Infuſion of Senna, 6 ounces.
Mix, as before directed, and let this be taken in the ſame manner.

100. Purging Pills.

Take Jalap in powder, } of each ½ a dram.
Polychreſt Salt, }
Venice Soap, 6 grains.
Opium, 1 grain.
Let theſe be formed into ſix pills for a doſe.

or---101.

Take Extract of Jalap, 10 grains.
Reſin of Jalap, } of each 3 grains.
Calomel prepared, }
Opium, 1 grain.
Syrup of Roſes, ſufficient to form four pills for a doſe.

102. Suppository.

Take of Honey, } of each an equal
Common Salt, } quantity.
Boil them to the conſiſtence of a ſoft pill, and roll a portion of this up about the thickneſs of a Gooſe's quill, and an inch long, which paſs into the rectum—Aloes, Bitter Apple, or ſome other ingredient of this ſort may be occaſionally mixed with them.

103. Irritating Glyster.

Take the Decoction for Glyſters, ½ a pint.
Tincture of Aloes, 1 ounce.
Common Salt, 2 drams.
Linſeed Oil, 2 ounces.
Mix.---

104. Purging Antimonial Mixture.

Take Diſtilled Water, 5 ounces.
Epſom Salt, 2 ounces.
Tartarized Antimony, 2 or 3 grains.
Syrup of Roſes, 6 drams.
Mix.---

No. 105. Calomel Bolus.

Take Calomel prepared, from 3 to 6 grains.
Tartarized Antimony, $\frac{1}{8}$ of a grain.
Conserve of Hips, 10 grains.
Mix, with the addition of Syrup, into a bolus, to be taken at bed-time, and in the morning after the following draught:

106. Purging Draught.

Take of Infusion of Senna, 2 ounces.
Tincture of Aloes, $\frac{1}{2}$ an ounce.
Tincture of Senna, 3 drams.
Syrup of Roses, $\frac{1}{2}$ an ounce.
Spirit of Lavender, 2 drams.
Mix.---

107. Volatile opiated Liniment.

Take of Soap Liniment, or the Liniment of Ammonia, } 2 ounces.
Tincture of Opium, 2 drams.
Mix.---

108. Aloetic Pills.

Take Extract of Bitter Apple with Aloes, $1\frac{1}{2}$ dram.
Calomel, 20 grains.
Oil of Carraway-seeds, 10 drops.
Syrup of Roses, a sufficient quantity to form pills.
Dose. From ten to twenty grains.

109. Aperient Soap Pills.

Take Venice Soap, $1\frac{1}{2}$ dram.
Rhubarb powdered, 1 dram.
Calomel prepared, 10 grains.
Syrup of Ginger, sufficient to form pills.
Dose. Twenty grains.

110. Sedative Liniment.

Take Oil of Almonds, 1 ounce.
——— Amber, from 10 to 20 drops.
Tincture of Opium, 1 dram.
Mix.---

111. Sedative Fomentation.

Take the Heads of the White Poppy bruised, } 4 in number.
Let these be boiled in forty ounces of Water to twenty, then add,
Vinegar, 3 ounces.
Fixed Ammoniacal Salt, 5 drams.
Mix.—

No. 112. Opiated Plaister.

Take Burgundy Pitch, a quantity ſufficient to form a plaiſter of a proper ſize, to which add ten grains of Opium.

113. Opiated cordial Mixture.

Take Peppermint Water,	6 ounces.
Spirit of Juniper,	1 ounce.
Opiated Confection,	1 dram.
Syrup of Saffron,	½ an ounce.

Mix.—Dose. Three or four ſpoonfuls.

114. Glyster with bitter Apple.

Take the Common Glyſter Decoction,	8 ounces.
in which boil	
Senna,	2 drams.
Bitter Apple,	½ a dram.
ſtrain, and add,	
Linſeed Oil,	2 ounces.
Honey,	1 ounce.
Sal Ammoniac,	2 drams.

Mix.—

115. Purging Pills.

Take Reſin of Jalap, or Scammony,	5 or 6 grains.

Rub theſe well with Mucilage of Gum Arabic, and Crumbs of Bread, ſufficient to form three or four ſmall pills.

116. Sedative Glyster.

Take Common Glyſter Decoction, or Barley Water,	6 ounces.
Tincture of Opium,	1 dram.
Mithridate,	1½ dram.

Mix.---

117. Deobstruent Soap Pills.

Take of Soap, Myrrh, Ammoniacum,	of each 1 dram.
Ammoniacal Iron,	½ a dram.
Rhubarb in powder,	1 dram.

Syrup of Roſes, ſufficient to form pills.

Dose. Fifteen or twenty grains.

No 118. Opiated Emulsion.

Take Caſtor Oil,	2 ounces.
Tincture of Senna,	1½ ounce.
——— Opium,	40 drops.
Peppermint Water,	5 ounces.
Syrup of White Poppies,	½ an ounce.

Mix.—Dose. Three ſpoonfuls.

119. Opiated Antimonial Powder.

Take Antimonial Powder,	4 grains.
Opium,	2 grains.
Rhubarb in powder,	5 grains.

To be adminiſtered every eight hours.

120. Vitriolic Mixture.

Take of Blue Vitriol,	½ a dram.
Diſtilled Water,	1½ pint.

Mix.—Dose. From one tea-ſpoonful to two table-ſpoonfuls every two or three hours, till it produces its effect.

121. Balsam of Peru Draught.

Take of Balſam of Peru, from 10 to 30 grains.
Mucilage of Gum Arabic, ſufficient to mix into a draught, with

Peppermint Water,	1½ ounce.
Syrup of Ginger,	2 drams.

122. Terebinthinate Mixture.

Take Æthereal Oil of Turpentine, from 1 to 2 drams.
Mucilage of Gum Arabic, ſufficient to form a mixture, with

Peppermint Water,	6 ounces.
Tincture of Rhubarb,	1 ounce.
Syrup of Saffron,	½ an ounce.

Dose. Four ſpoonfuls two or three times a day.

123. Infusion of Carrot-seed.

Take the Seeds of wild Carrot,	½ an ounce.
Boiling Water,	½ a pint.

When cold, add to it a little Milk and Sugar, and drink it twice a day.

124. Terebinthinate Glyster.

Take either of the Glyſters, No. 25, 26. in which diſſolve, by means of the Yolk of Egg,

Venice Turpentine,	2 drams.

No. 125. Antimonial nitrated Powder.

Take Antimonial Powder,	3 or 4 grains.
Nitre purified,	10 grains.
Crabs Claws prepared,	8 grains.

Mix.—

126. Volatile Saline Mixture.

Take Water of Acetated Ammonia,	2 ounces.
Polychreſt Salt,	1½ dram.
Syrup of Wild Poppy,	½ an ounce.

Mix.—

127. Mustard Whey.

Take Bruiſed Muſtard-ſeed,	1 ounce.
Cow's Milk,	1 quart.

Boil them together, and ſtrain off the Whey.

128. Gum Guaiacum Draught.

Take of Gum Guaiacum,	from 20 to 30 grains.
Mucilage of Gum Arabic,	ſufficient to form a draught,
with Peppermint Water,	1½ ounce.
Compound Spirit of Ammonia,	from 20 to 30 or 40 drops.
Syrup of Saffron,	2 drams.

129. Guaiacum and Calomel Bolus.

Take of Gum Guaiacum,	20 or 30 grains.
Calomel prepared,	3 grains.
Oil of Carraway-ſeeds,	2 drops.
Conſerve of Orange-peel,	20 grains.

Syrup of Saffron ſufficient to form a bolus.

130. Stimulant Plaister.

Take of Soap Plaiſter, Gum ditto,	equal parts.
Powdered Spaniſh Flies,	⅛ part of the whole.

Mix.—

131. Antimonial cordial Diaphoretic Bolus.

Take of Antimonial Powder,	3 grains.
Camphor, Volatile Salt of Hartſhorn,	of each 4 grains.
Aromatic Confection,	10 grains.

Syrup of Saffron, ſufficient to form a bolus.

No. 132. Camphorated Liniment.

Take Camphor,	2 drams.
Oil of Almonds,	1½ ounce.

Mix.—

133. Nauseating Powder.

Take Ipecacoanha Powder,	1 grain.
Nitre, or Aromatic Powder,	10 grains.

To be taken every third hour.

134. Decoction of Semirauba.

Take of Semirauba Bark,	2 drams.
Diſtilled Water,	20 ounces boiled to 16 ounces.

Dose. Four ſpoonfuls.

135. Aperient cooling Solution.

Take Vitriolated Natron,	1 ounce.
Nitre,	2 drams.

Diſſolve them in one quart of Water-gruel, then add,

Syrup of Roſes,	1 ounce.

Mix.—Dose. Eight ſpoonfuls.

136. Gentle aperient Electuary.

Take Compound Electuary of Senna,	1½ ounce.
Precipitated Sulphur,	3 drams.

Syrup of Roſes, ſufficient to form an electuary.

Dose. Quantity of a Nutmeg.

137. Tonic Infusion.

Take Peruvian Bark in groſs powder,	2 ounces.

Infuſe it for three days in

Lime Water,	2 pints.

ſtrain, and add

Tincture of Cinnamon,	1 ounce.
Compound Spirit of Lavender,	½ an ounce.

Mix.—Dose. Two ounces.

138. Alum Whey.

Take Cow's Milk,	2 pints.
Alum,	3 drams.

Boil theſe together, and ſtrain off the Whey for uſe.

Dose. Four ounces.

No. 139. Opiated Chalybeate Bolus.

Take of	Ammoniacal Iron,	8 grains.
	Powder of Antimony,	6 grains.
	Opium,	1 grain.
or	Tincture of Opium,	25 drops.
	Conſerve of Roſes,	1 ſcruple.

Syrup of Quinces, ſufficient to form a bolus.

SECTION XVI.

NERVOUS AFFECTIONS.

UNDER this head we are to enumerate thoſe particular complaints in which the nerves are primarily and principally concerned, as the cauſes from whence diſorders of this kind are produced.—And here we ſhall be under the neceſſity of reaſoning from effects, becauſe we cannot point out the preciſe mode of the action of the nervous ſyſtem; for neither from the labours of the anatomiſts, nor phyſiologiſts are we certain of the ſtructure of the nerves themſelves, nor of the means by which they produce ſuch a wonderful variety of actions in different parts of the human machine.

We, therefore, in order to avoid cavil, attempt to materialize, as it were, qualities; and ſpeak of the different degrees of influence which this part of the ſyſtem exerciſes; and attribute all complaints ariſing from this ſource, either to that influence being too ſtrong, mutable, or too weak, producing SPASM, CONVULSION, or PALSY;—according, therefore, as we find the different parts ſubſervient to nervous influence affected,

affected, ſo do we conſider the different ſtates of its power. And if we add to the account the different degrees of muſcular irritability inherent in the habit, which we conſider as independent of nervous influence, yet for its continuance ſupported by that influence, (18.)—we ſhall be furniſhed with a tolerable clear idea of the nature of different nervous complaints, ſo called, and be enabled to conceive, pretty diſtinctly, the reaſons why ſuch an amazing variety of affections can ariſe from one and the ſame ſource; for in *ſpaſmodic* affections the muſcular fibres, thrown into a ſtate of contractility, remain in that ſtate for ſome time; in *convulſive*, contraction, and relaxation take place, and alternate with each other—(225, 226, 227.) and in *paralytic* there appears to be a deprivation, or debility of that influence; as well as ſometimes an alteration in the irritable power of the muſcular fibres, with reſpect to the different degrees they poſſeſs. In the order we have ſet down theſe nervous complaints, ſhall we treat them; and firſt—of ſpaſmodic affections:—

CHAP. I.

§ 1. TETANUS;

SO called from the Greek word *teino*, firmo—and its varieties—EMPROSTHOTONOS—from *emproſthon*, ante, before—OPISTHOTONOS—*opiſthon*, pone, behind—and

TRISMUS,

TRISMUS, from *trizo*, ſtridor. Theſe are marked by different appearances ariſing from ſimilar cauſes.

The TETANUS—is a ſpaſtic rigidity of the whole body—commonly continued—and involuntary; if it is bent forwards, it is called EMPROSTHOTONOS—if backwards, OPISTHOTONOS—when the jaws are fixed cloſe, TRISMUS, or locked jaw.

This complaint is moſt commonly met with in hot countries, where it is conſidered as endemial, particularly in rainy ſeaſons ſucceeding thoſe which are hot, or in ſuch where there are ſudden changes from extreme heat to extreme cold, as in South Carolina—among thoſe who imprudently expoſe themſelves to the night air.—In the more temperate countries it is very rarely met with as an original diſeaſe.

DESCRIPTION. In tetanus the body grows ſtiff, and appears like a ſpecies of wood, from the equable contractility of the muſcles before and behind—a ſpaſmodic affection is felt below the breaſt bone, verging to the ſpine—when the ſpaſms are violent, moſt acute pains come on—the face is red and diſtorted—the cheeks are drawn backwards—the eyes fixed—the jaw ſometimes locked—the pulſe moſt frequently is ſlower than what is natural—and ſhould blood be taken, its texture appears to be leſs firm—there is much difficulty in reſpiration—the body is coſtive—the natural actions only are not ſuppreſſed, and the ſenſes both external and internal, remain perfect—the ribs curve inwards—and if the diſeaſe ſhould be conquered, the patient continues a long time in a ſtate of great debility.

In the two ſucceeding varieties, the neck at firſt becomes immoveable—afterwards, by ſtrong ſpaſms, it is drawn either backwards or forwards—the motion of the jaw and the act of ſwallowing are impeded—the ſpaſm under the breaſt-bone brings on others which are more violent—the pulſe is ſometimes ſlow and hard—at others ſmall, fluctuating, and irregular—the tongue grows rigid—a bloody kind of froth iſſues from the mouth—the muſcles of the ſpine and inferior extremities are drawn into ſimilar action—at length, either by the ſpaſms becoming more violent, or from an epileptic attack, the unhappy patient expires.—In the the third variety, the diſtinguiſhing ſymptom is, a ſtrong contraction of the muſcles which elevate the lower jaw.

Theſe diſeaſes are of the moſt dangerous nature, as very few ſurvive the third day, without they come on gradually; and in that caſe, if the patient can get over nine or ten days, there is a greater chance of a recovery—hence, from the manner of the attack, is it that we are to eſtimate the degrees of danger.

CURE. The indications here are, to take off as ſpeedily as poſſible the ſpaſmodic affections, and afterwards to give tone to the ſyſtem—and theſe are done chiefly by the bold adminiſtration of opium, and the warm bath; for opium given in this way has been known to cure when every other remedy has been tried in vain.

The quantity of opium to be given at a doſe, and its repetitions, depend upon the violence of the ſpaſms—therefore, from one or two to five grains may be given

given every hour in any convenient vehicle, and the doſe may, according to the urgency of the ſymptoms, be occaſionally increaſed; for in theſe caſes it never ſtupefies—it may be advantageouſly uſed with other ſpaſmodics, particularly aſafœtida or muſk; and theſe likewiſe muſt be freely exhibited—glyſters alſo of opium diſſolved may be thrown into the inteſtines, joined with oil or turpentine, diſſolved in the yolk of an egg; and theſe muſt be often repeated, particularly if there is any difficulty of ſwallowing, or the jaws are cloſed.

The body muſt, if poſſible, be kept open by doſes of manna, Polychreſt, Glauber's, or Rochelle ſalt, or that of Epſom, formed into emulſions, with oil of almonds and tincture of ſenna—or caſtor oil will, perhaps, better anſwer the purpoſe. (See No. 97, 98. 99. 118.)

With regard to warm bathing, thoſe who recommend it order the patient to lie along the bath, and, whilſt they are in it, frictions uſed—when taken out, to be wrapped up wet as they are in warm blankets, and put to bed—having, whilſt there, the abdomen fomented, and a bladder full of warm water laid upon the ſtomach.

The copious exhibition of bark and wine, two or three ounces of the former, and from two to three pints of the latter, in the ſpace of twenty-four hours, have, from their ſucceſs, been recommended;—along with which a bliſter was applied to the back, and two or three ounces of mercurial ointment rubbed into the throat, in the ſpace of ten days.

Cold bathing has alſo been uſed with ſome efficacy, and ſeemed to anſwer, though the patients were plunged into the water during the violence of the fits of pain and ſpaſm.—Oil of amber and flowers of zinc have been recommended amongſt the powerful antiſpaſmodics in theſe caſes.

From the very different methods uſed by practitioners in theſe complaints, which ſeem, according to our conceptions, to produce ſuch oppoſite actions on the habit, and both proving ſucceſsful, I ſhould conclude, that the nature of the habit conſtitutes the neceſſity for this deviation.

In conſtitutions, therefore, which were athletic and robuſt, with a hard full pulſe, I ſhould not heſitate to bleed, and have recourſe to the ſedative mode of opium, joined with antiſpaſmodics, and warm bathing.

In ſuch as were relaxed, and ſhewed evident ſigns of debility, to the ſtimulant and ſtrengthening—of bark and wine, joined with antiſpaſmodics—bliſtering—and the cold bath—and in both, to the local application of mercurial inunction.

And when it proceeded from any local affection, cut off all communication between the part affected and the common ſenſorium, by dividing the nerve, or amputating the part; for this has proved ſucceſsful, by removing the irritable cauſe, which ſympathetically induces ſuch dangerous ſpaſmodic affections—and in caſes of locked jaw, a bliſter ſhould be applied to the throat.

After

After the diſeaſe is conquered, in order to prevent a relapſe, and recruit the ſtrength of the patient, we ſhould have recourſe to bark and chalybeates, cold, or ſea bathing, and ſuch other modes as we have formerly recommended to people recovering from other ſevere diſeaſes.

§ 2. CONVULSIONS,

from the Latin word *convello*, to ſhake or pull, are different in their appearance, though affections of the nervous ſyſtem, from the former; for in all tetanic complaints the muſcles continue for ſome time in a ſtate of contractility—in theſe they ſuffer ſome agitation, by quickly contracting and relaxing—as if in *tetanus* muſcular irritability was ſo powerful, and the tone of the muſcular fibres ſo ſtrong, as to be capable to continue the contractile force of the muſcular fibres, brought on by the increaſed nervous influence—in *convulſion*, as if there was a deficiency of that irritable power, and the tone of the muſcular fibres ſo much in a debilitated ſtate, that relaxation muſt unavoidably take place, the muſcular fibres, from the want of that ſtrength, being capable of maintaining that action only momentaneouſly—or they may ariſe from the nervous influence, though more powerful than natural, only being exerted in a leſs degree; for we find tetanus and convulſion will ariſe from ſimilar cauſes, and never run one into the other—hence have they been divided by authors into *tonic*, from *teino*, firmo, to ſtrengthen, and *clonic*, from *kloineo*, moveo, to move or ſhake.

CONVULSIONS, therefore, are to be conſidered as affections of the nerves, by which the muſcles are thrown into involuntary contractions and relaxations, whilſt, at the ſame time, the faculties of the mind, and the external ſenſes, remain perfect.---Now as theſe, though different in ſome peculiar appearances, differ not from epilepſy, but acknowledge the ſame cauſes, both remote or inducing, proximate or immediate, and ſimilar methods of cure, we ſhall proceed to ſpeak of that diſeaſe:

§ 3. EPILEPSY, OR FALLING SICKNESS;

ſo called from the Greek word *epilambaneſthai*, deſuper deprehendi, to be ſeized from above. It has various other names, as *morbus comitialis*, becauſe it was obſerved frequently to attack people whilſt in thoſe aſſemblies called *comitia*---*morbus ſacer*, divine diſeaſe, as appertaining to divinity for its infliction or cure---*puerilis*, becauſe of its frequency in children---*Herculeus*, on account of its violence, and difficulty of cure.

It is a ſudden deprivation of the internal and external ſenſes, with violent alternate contractions and relaxations of almoſt the whole of the muſcles of the human machine, termed convulſive;---of which there are ſaid to be three ſpecies—*cerebralis*, from affection of the brain, when it owes its origin to ſome imperceptible cauſe, preceded by no uneaſineſs, except giddineſs or loſs of ſight—when it ariſes from any manifeſt cauſe, and is preceded by ſome ſingular ſenſation, mounting upwards from different parts of the body to the head, it is termed *ſympathica*, as deriving its origin

from

from ſympathetic affections—when from perceptible irritation the fit is brought on, and vaniſhes on the ceſſation of that morbid effect, *occaſionalis*.

It differs from convulſion, from being accompanied by total inſenſibility—in its returning at different periods, though not always regular—in its being a chronic diſeaſe, that often, without deſtroying life, continues for a ſeries of years.

DESCRIPTION. The attack of an epilepſy is ſomething like that of an apoplexy, the patient falls down ſuddenly, deprived of all ſenſe: but then they do not, as in an apoplexy, lie quiet, as if in a profound ſleep---in this it is quite the reverſe, for the whole muſcular ſyſtem is agitated by ſuch violent convulſive motions, that it is almoſt impoſſible for the attendants to prevent the unfortunate afflicted from hurting themſelves---and ſhould, during the violence of the paroxyſm, the tongue be caught betwixt the teeth, it will be much wounded, bit through, or, perhaps, a portion bit off.

Sometimes the urine, fæces, and ſemen, from the violence of the convulſions, will be forced from the places where they are depoſited, and blood will pour from the veſſels of the noſe and ears; beſides, there is for the moſt part, a good deal of froth foams from the mouth, even in the more ſlight attacks;---as ſoon, however, as the convulſions ceaſe, the patients lie quiet, as if aſleep; and, in about an hour or two, recover their ſenſes, feel ſore and fatigued, yet ſtill are forgetful of all which has paſſed.

Some people have been ſo expert, as to counterfeit theſe fits ſo well, that inattentive obſervers, though medical practitioners, have been deceived---but we muſt remark, *that a total deprivation of ſenſe and feeling* diſtinguiſh the true epilepſy---if, then, by the application of ſtrong volatile ſubſtances to the noſe, or ſuddenly pricking ſome ſenſible part, without mentioning the intent, they ſhew evident ſigns of feeling, the deception may be made obvious.

Sometimes, before the fit comes on, it will be preceded by wearineſs, ſtupor, head-ach, or giddineſs affecting the ſight—ringing in the ears—frightful dreams ---palpitation of the heart---difficulty of breathing---a fullneſs of, and rumbling noiſe in, the belly---the patients alſo will make larger quantities of limpid urine than uſual---ſtammer in their ſpeech---their countenance will be pale—their extremities cold—and complain of a ſenſation of cold air aſcending to the head.

CAUSES. The *remote* or *inducing* are, wounds—blows—and fractures of the ſkull—any fluid deluging the brain, or filling the ventricles—an inflammation or mortification of the brain—indurations there, or in the membranes — concretions or polypi within the cavity of the ſkull—caries of the internal ſurface of the ſkull—projections of the bony ſubſtance preſſing upon the brain—eroſions—lacerations—or wounds of the nerves—the retention of accuſtomary evacuation—too great fullneſs or emptineſs of the vaſcular ſyſtem—ſtrong paſſions or affections of the mind, particularly

ſudden

ſudden and ſevere frights---noxious particles taken into the machine---poiſons---or an hereditary taint; for few diſeaſes, it is allowed, are ſo hereditary as this, as it is ſo eaſily tranſmitted from parents to their offspring. For the *proximate* or *immediate cauſes*, ſee what has been ſaid in treating of convulſions.

CHARACTERISTIC SIGNS. A convulſion of almoſt all the muſcles of the body, particularly thoſe ſubſervient to voluntary motion—with a deprivation of all ſenſation, and terminating in a ſtate of inſenſibility and apparent ſleep---to which, according to the opinion of ſome authors, may be added, a foaming of the mouth, and a ſtrong compreſſion of the thumbs within the other fingers; for theſe two are by them conſidered the certain ſymptoms of this diſeaſe.

CURE. As ſeveral of the preciſe cauſes cannot before death be diſcovered; or were they, *they* would be irremediable---we muſt content ourſelves with general modes of cure, and depend upon thoſe applications which have, in a variety of caſes, from experience, proved ſucceſsful—but where the cauſes are perceptible, and within the reach of our art, they muſt be particularly adverted to, and removed.

In this complaint, from undiſcoverable cauſes, a variety of medicines, chiefly empirical, have been recommended---*animal oil*---*oil of amber*, (229.)---*flowers of lady's ſmock*, twenty grains, increaſed to thirty, taken in powder twice a day---*leaves of the orange tree*, a handful boiled in a pint of water for two doſes, or in powder, half a dram twice a day—*blue vitriol*, (210.) twice a day —*ammoniacal copper*, a quarter of a grain---*bark* and

valerian, joined with *cinnabar*, (No. 140.)---flowers of zinc, (210.) have been highly ſpoken of, and ſaid to have performed permanent cures.

According to different conſtitutional circumſtances, various methods have been recommended.

1ſt, Where the fluids have been acrimonious---or, 2d, in a ſtate of fullneſs---3d, ſubject to affections of the ſtomach, from indigeſtion or foulneſs---or, 4th, irritation of the inteſtines, from worms or other acrid materials.

In the FIRST caſe, courſes of *mineral waters*, which beſt agree with the conſtitution---*goat's whey*---*ſea-water*---*with cold bathing*.

In the SECOND, *iſſues* between the ſhoulders, or on the inſide of the thighs—*ſetons* in the neck—*occaſional bleeding*—and the body ſhould always be kept open.

In the THIRD, *emetics* given now and then; for they are of ſervice, not only by unloading the ſtomach, but giving a general ſhock to the habit; and ſeem calculated to remove irritation from acrid materials on the origin of the nerves and ſpinal marrow, or from the dura mater, (16.) which is ſuppoſed to be the immediate ſeat of this complaint.

In the FOURTH, purgatives, joined with calomel, ſhould be adminiſtered occaſionally, intermediately giving anthelmintics. (305.)

The mind, at the ſame time, muſt be kept free from any uneaſy ſenſation or unruly paſſion—the diet ſhould be light, and eaſily digeſtible—gentle exerciſe—free, clear air, and whatever will conduce to preſerve an equable circulation of the blood, and keep up perſpira-

perſpiration, ought not by any means to be avoided; for where there is a prediſpoſition to convulſive attacks, any irregularity is greatly conducive to occaſion a renewal.

If the fits ſhould be of long duration, muſtard poultices and bliſters are adviſed—thruſting a wedge between the teeth to keep the mouth open—this laſt is ſaid to prevent even the fit, if applied on any warning being given before the fit comes on.

When uneaſy ſenſations are felt in the toes, feet, or legs, creeping upwards, ligatures below the knee in theſe caſes have been known to prevent the fit—or, in whatever part theſe affections may be perceived, applying ligatures above the part ſo affected.

Some, however, adviſe, during the fit, not any thing to be attempted, except preventing the patients from hurting themſelves, by getting the tongue between the teeth; and they are of opinion, little can be done to ſhorten the paroxyſm.

Amongſt the moſt effectual remedies, I have generally thought muſk, and have uſed it with ſucceſs, joined with diaphoretics and tonics—and, in order to prevent the acceſſion or return, occaſional emetics and aperients.

Inveterate and habitual epilepſies are irremediable, as is that alſo which is hereditary, if it continues longer than the age of twenty-five.

That ſpecies called the HYSTERIC, or UTERINE EPILEPSY, is diſtinguiſhed from the ſex of the patient, from its being intermixed with, or preceded by, hyſteric

ric affection—by its following the time of the menſes—at its periods—or being brought on by fear, or ſome ſuch ſimilar cauſe—and by ſenſation during the fit, being extremely obſcure, though not altogether ſuppreſſed.

SYDENHAM ſays, in this complaint the patients exert unuſual ſtrength, bawl out incoherently and inarticulately, and ſmite their breaſt; and that women moſt ſubject to this diſeaſe, are thoſe who have an uncommonly ſanguineous habit, and are high ſpirited.

Obſtructed menſes are generally accounted a cauſe of this diſeaſe, which makes its appearance agreeable with the periods of this diſcharge.

Should it happen during the flux, beſides thoſe things indicated from their diſcharge and painful excretion, volatile and antihyſteric remedies are required, ſuch as oil of amber, ſpirits of vitriolic æther, caſtor or animal oil, liquor of hartſhorn, camphor, muſk, &c. (229.)

If from the menſes being obſtructed, ſuch things ſhould be adminiſtered as are calculated to promote the diſcharge, as madder-root, (211.) tincture of Spaniſh flies, (271.) ammoniacal iron, (210.) ſabine, (228.) bathing the feet in warm water.

Extract of hemlock, (233.) taken for two months, cured a girl ſeized with an epilepſy, who for five years had experienced many fits.

Dividing the cartilaginous, or griſtly ſubſtance of the ear with a knife, not extremely ſharp, and thick at the back, ſo that the diviſion may be large, has been

been ſucceſsful, procuring and promoting, at the ſame time, a copious evacuation, as long continued as poſſible.

CHAP. II.

PASSIVE NERVOUS AFFECTIONS.

THE nervous diſeaſes of which we have before treated are obviouſly of the active ſort; but there are others which are aſſociated with inactivity, with reſpect to muſcular motion, and conſtitute a claſs of diſeaſes oppoſite to the former. Theſe are ranked by authors under the terms DEBILITIES and PRIVATIONS; becauſe of the loſs of, or weakened action of particular powers in the conſtitution, which are the diſtinguiſhing characteriſtics of theſe diſeaſes.

Dr. CULLEN arranges theſe under nervous diſeaſes; and are known by that propenſity to ſleep, muſcular relaxation, and inſenſibility, which are their conſtant concomitants.

But, in order to give a proper idea of theſe diſeaſes, we ſhould conſider the cauſe of the three predominant ſymptoms. If we revert back to what has been ſaid, page 17, 18. on nervous incitability, and muſcular irritability, and to the introductory part of nervous affections, we ſhall not be at a loſs to account for two of the

the ſymptoms.—As for the unnatural propenſity to ſleep, it is ſuppoſed to ariſe from the nerves not being ſufficiently ſupplied with their proper fluid, either from a defect of the general maſs of this enlivening liquid, or from ſome compreſſion on the nerves, by which its free diſtribution is impeded.

Hence extreme cold—exceſſive diſcharges of blood—congeſtion, and over diſtenſions of the veſſels of the head—of ſanguinary or ſerous fluid in the ventricles, (17.) and cellular interſtices of the brain—extravaſated blood within the cranium—depreſſion, or fracture of the ſkull, forcing it upon the brain, ſo as to compreſs the medullary part, and prohibit the circulation of the nervous fluid from thence to the ſeveral organs of ſenſation, and inſtruments of voluntary motion, may give riſe to this ſymptom of ſomnolency, or unnatural propenſity to ſleep.

Now, where this ſymptom predominates over the reſt, thoſe diſeaſes come under the general term COMATA, comatous or ſomnolent, from the Greek word *koma*, ſomnus profundus, a deep ſleep---and are defined as diminution of voluntary motion, attended with ſleep, or a deprivation of ſenſation.

§ 1. APOPLEXY—APOPLEXIA;

ſo termed from the Greek *apopleſſo*, deſuper percutio, to be ſtruck down, is a deprivation of all the internal and external ſenſes and animal motion, except of the heart and cheſt, attended with oppreſſed reſpiration, and ſleep more or leſs profound. It has been divided into

into different ſpecies, from the cauſe---firſt, into ſanguineous---2d, ſerous.

DESCRIPTION. *In the firſt* of theſe, the apoplectic ſtroke, at the beginning, is accompanied with a florid, or deep red colour of the face, heat, and full pulſe; though, in the progreſs of it, the heat and colour recede---and, on theſe accounts, it is underſtood to proceed from an internal cauſe---the veins grow turgid---the eyes half open, but not tranſparent---the reſpiration tolerably free, though attended with ſnoring, or rattling noiſe in the throat---and the pulſe full and ſtrong. It attacks more ſuddenly than the ſerous, without much previous oppreſſion, or unuſual ſleepineſs.

In the ſecond, from the beginning the pulſe is weak ---the countenance pallid---the heat diminiſhed---and it attacks old people, acrimonious, phlegmatic, and debilitated habits---and, before the ſtroke, it is apt to be preceded by an unuſual pain, heavineſs, and giddineſs of the head, and drowſineſs---after the attack, the veins are not turgid---the reſpiration is more ſtraitened, and there is more of the rattling and ſnoring, with frothy foaming from the mouth, than in the other---and the pulſe is neither ſtrong nor remarkably full, but inclines to intermit.

Though the apoplectic fit will ſometimes come ſuddenly on---at others, it is preceded not only by a pain and giddineſs of the head, but a general torpor of the ſenſes---ſlowneſs of ſpeech---a trembling and ſtupor of the extremities---hypochondriac and hyſteric affections ---that oppreſſion in ſleep called the night-mare---involun-

voluntary flow of tears from the eyes—ringing noiſe of the ears—and a deeper mode of breathing than is uſual.

CAUSES. The *remote* or *inducing* are, ſurfeits—indigeſtion—too long expoſure to the ſun—inordinate drinking, particularly about the age of ſixty—ſtrong paſſions—hyſteric affections—convulſions—ſerous collections—libidinous exceſs, particularly in old men—repulſion of acrid matter—ſuppreſſion of urine—ſalivation interrupted by cold and other cauſes ſuddenly—blows and wounds of the head—poiſons—noxious effluvia—an hereditary taint—or, indeed, whatever can increaſe the volume of blood, or occaſion a ſtagnation in the brain, or produce ſuch effects there as will prevent the nerves from exerciſing their influence, which is conſidered as the *proximate* or *immediate* cauſe.

It generally attacks thoſe who lead ſlothful lives—are corpulent and full of blood—have ſhort necks—are hard drinkers at advanced periods of life—it is alſo moſt common in winter and rainy ſeaſons, and is ſometimes epidemic.

The CHARACTERISTIC SIGNS have been ſpecified, page 670. line 22.

CURE. Nature has ſometimes, by her own efforts, relieved and remedied this complaint, *but ſeldom*, by producing ſome copious evacuation, as bleeding from the noſe, looſeneſs, or a large flow of ſaliva, though the cure is generally dependent upon art.

Of whatever nature is the diſeaſe, our efforts muſt be exerted with all poſſible expedition, to conquer the obſtructions, and take off the congeſtion in the brain,

brain, according to the difference of the obſtructing cauſe.

We muſt therefore, if the conſtitution of our patient will bear it, bleed copiouſly, and from large orifices; firſt in the arm; if no relief accrues, then in the foot; and, ſhould the habit be full of blood, the operation muſt be repeated.—The application of cupping-glaſſes, with deep ſcarifications, to the back part of the head is very uſeful, to unload more immediately the veſſels of the brain—or blood may be taken from the jugular vein, running up the neck into the head—and if the patient recovers ſo far as to be able to ſwallow, the evacuating plan muſt be perſiſted in—hence quick and powerful purgatives ſhould be adminiſtered, (No. 146.)--but, notwithſtanding the ſanguinary evacuations, ſhould the patient remain in a ſtate of torpor, acrid ſtilating glyſters, (No. 103. 114.) ſhould be immediately thrown up—and, none of theſe efforts ſucceeding, bliſters ſhould be applied to the legs and thighs—ſome adviſe an actual cautery to the ſoles of the feet, to ſtimulate and rouſe the conſtitution.

The pulſe in theſe caſes is commonly ſoft, full, and ſlow; but when it is more depreſſed and unequal, and the reſpiration deep and laborious, in proportion to the exceſs of theſe alterations, death is nearer at hand.

If the diſeaſe be of the *ſerous kind*, with regard to bleeding, we muſt act cautiouſly; it is rarely requiſite; if at all—it muſt be moderate; or leeches may be applied to the temples—quick and briſk vomits are in theſe caſes moſt eligible, ſuch as white vitriol, (259.)

tartarized antimony, (259.) or antimonial wine, (259.) —after the operation, briſk purges ſhould be given, (266.)—bliſters applied, and ſtimulating acrid glyſters, (No. 103. 114.)—emetic wine, tobacco ſmoke: and volatiles, ſhould be given pretty freely, (No. 36, 37.) and things ſimilar—and, though in the ſanguineous ſpecies ſternutatories and emetics are prohibited, at leaſt before the fullneſs is abſolutely taken off, for fear of burſting the veſſels of the brain, in this caſe they are highly beneficial.

Some are of opinion, that the compreſſion productive of apoplexy ſeldom or never deduces its origin from extravaſation of ſerum; and think, that whether blood or ſerum is the caſe, the ſame methods are to be purſued to accompliſh a cure, as bleeding—briſk purging—applying bliſters to the back, legs, and thighs —volatiles and preparations of iron internally, out of the fit—a table ſpoonful of whole muſtard-ſeed, in groſs habits, taken two three times a day—muſtard-ſeed or horſe-radiſh infuſed in wine, two ounces to be taken at the ſame periods, I conſider a more eligible medicine after the paroxyſm is over; for it is certainly uſeful to endeavour to recover the tone of the veſſels, which are in theſe caſes apt to be too torpid, and have been debilitated by too great a degree of diſtenſion.

One common remedy, which is ſaid to be efficacious in recovering patients from the fit, has been adviſed, viz. a handful of ſalt diſſolved in a pint of water, and poured down the patient's throat.

With

With reſpect to bleeding, ſome prefer opening the temporal artery, or jugular vein—and, *when no threatening fullneſs appears*, leeches applied to the head, or ſcarifications with cupping-glaſſes to the hind head, are eſteemed preferable to general bleeding.

Bliſters all over the feet are recommended by ſome, whilſt others prefer their application to the head—but, in fine, thoſe remedies are moſt to be preferred, and the places of application for external remedies, which moſt ſpeedily promote evacuation, and remove the torpor or inactivity of the veſſels.

I ſhould, therefore, upon the attack, recommend bleeding from the arm, and that repeated, if neceſſary, till the general fullneſs was relieved—and bliſters, or ſtimulant poultices to the feet, with purgatives—afterwards local bleeding, and the uſe of ſtimulating volatiles—and, in order to prevent a relapſe, *in full habits*, (75.) the diet ſhould chiefly be of the vegetable kind, light and ſparing, that too great plenitude might be avoided---not more than ſix or ſeven hours ſleep ſhould be allowed at a time—and briſk exerciſe taken—in lying down, the head ſhould be elevated, and thinly covered---the body kept always open---and all natural and habitual diſcharges in due order, for fear any ſuppreſſions ſhould take place---hence cold and wet ſhould be avoided, and frictions every night applied to the extremities.

But in weakened and relaxed habits, where the circulation is languid, the veſſels ſluggiſh, as in thoſe ſtiled phlegmatic, (75.) iſſues and ſetons, as prevenlives, are adviſable---cathartics and emetics ſhould be

now and then adminiſtered---briſk exerciſe, and dry frictions---and courſes of ſteel waters;---and, by way of medicine, muſtard, horſe-radiſh, (253.) ſquills, (272.) ammoniacal iron, (210.) myrrh, (253.) and ſuch like, ſhould be occaſionally given.

When this diſeaſe occurs from a blow, fall, or ſome external injury, the patient falls down ſuddenly, or lies as if lifeleſs—and, on coming to himſelf, rejects the contents of the ſtomach—blood iſſues from the noſe and mouth—afterwards the pulſe riſes, and becomes frequent and ſtrong, attended with heat.

Large and repeated bleeding is in this caſe requiſite, and the evacuating plan, to relieve the ill effects produced by a concuſſion on the brain---and, ſhould there be any fiſſure, fracture or depreſſion, chirurgical aſſiſtance is abſolutely neceſſary.

There are two other complaints, one called CARUS, from the primitive Greek word *karos*, ſignifying a profound ſleep---and LETHARGUS, from *lethe*, memoria abolita, a loſs of memory, and *argos*, ignavus, a kind of ſtate of oblivion—each of which are but a ſpecies of apoplexy; and as they require ſimilar remedies, according to the cauſes and conſtitutions they attack, little need here be ſaid on theſe complaints more than what has been advanced rela ve to the cure of apoplexy.

CARUS is diſtinguiſhed by the profound ſleep from which the patient can ſcarce be rouſed, and in which the patient is deprived of all ſenſe and motion, though having eaſy and free reſpiration—and the LETHARGY, by the ſlight ſleep, from whence the patient is ſoon awakened,

awakened, anſwering queſtions which he is aſked, moving his poſture; but forgetting every thing, however recent; and on account of that ſluggiſhneſs, which is its concomitant, not caring for, or troubling his head about any thing---attended with increaſe of heat, ---ſlow fever---a full pulſe, often remitting---reſpiration not quick---paleneſs and ſwelling of the eye-lids ---and cold ſweat in the extremities.

The CATALEPSY, from the Greek word *katalambano*, retineo, from the retention of the poſition in which the attack is made, ſeems to be of the ſame ſpecies; but as it is attended with ſome ſtriking peculiarities, it merits obſervation.

DESCRIPTION. The patients are ſuddenly ſeized with the fit, which returns at intervals---a torpor of mind or body, or a head-ach precedes---on a ſudden they are deprived of all ſenſe and motion, and conſtantly retain the firſt poſture of the body and limbs, whether ſtanding or ſitting, in which they were when attacked---for the moſt part, after ſome minutes, ſeldom longer, they riſe as if from a ſleep, the head being relieved from its load, and in a proper ſituation to exerciſe its functions, though they are totally forgetful of the time which paſſed in the fit; during which they not only loſe all ſenſe and motion; but whatever may be done to them thus afflicted to produce ſenſation is without effect; for they neither feel, hear, nor ſee, though their eyes are open, and continue fixed as if upon one object; and when they recover, it is with repeated ſighing---ſtill the pulſe and reſpiration appear not affected.

This complaint is of the chronic kind, returns, like an epilepſy, periodically;—ſometimes it is ſimple—ſometimes combined with other diſeaſes.

CAUSES. The *remote* or *inducing* are, mental affections—cloſe thinking—ſuppreſſion of ſome evacuations---worms---cold---or collection of contaminated ſerum within the ſkull.

The *proximate* or *immediate*, an irregular exerciſe of nervous influence, whereby ſome of the nerves continue to act, whilſt others remain in an inactive ſtate.

CHARACTERISTIC SIGNS. A deprivation of all ſenſation---the patients maintaining the poſition of the body and parts in the ſame ſtate as when they were ſeized, whilſt the pulſe and reſpiration continue as in health.

CURE. During the fit little is to be done, except to rouſe the patient to a ſenſe of feeling, by the application of ſtimulant, volatile, and fœtid medicines to the noſe---or ſtrong acid ſpirits---rubbing the neck, ſpine, and back part of the head with rectified oil of amber and ſpirits of wine, camphorated ſolutions, or æther---giving alſo acrid glyſters, (No. 103. 114.)—and if there is reaſon to conclude any fullneſs of the head, leeches may be applied to the temples, or the internal part of the noſtrils may be ſcarified.

After the fit, we muſt have recourſe to ſuch things as are calculated to remove the inducing cauſe---hence, ſhould it be occaſioned *by too ſerious thinking or melancholy*, in which the viſcid humours ſtagnate in, or circulate ſlowly through the veſſels of the brain, we muſt apply to ſuch remedies as thin the blood, derive it from

from the head, and are appropriated to bring on an equable circulation---beſides glyſters and mild cathartics, we muſt bleed in proper time, adviſe briſk exerciſe, a judicious uſe of the non-naturals, with light, eaſy digeſtible, and ſtimulating diet—bathing the feet in warm water—general warm baths—and courſes of mineral waters, or milk whey—with bark, ſteel, or ſuch other aſtringents as give ſtrength and activity to the ſyſtem.

If from ſanguinary evacuations ſuppreſſed inducing a fullneſs of the habits, as the menſes or the piles—or any neglect or omiſſion of accuſtomary evacuations, from ſetons, iſſues, bliſters, &c.—we muſt endeavour to leſſen the quantity of circulating fluids, by bleeding in the feet—or, if the apprehenſion of an apoplexy ſhould ſtrike us, the inſide of the noſtrils ſhould be ſcarified—and afterwards the ſuppreſſed evacuations ſhould be attempted to be renewed.

Should worms be the cauſe, to vermifuges we ſhould have recourſe, of the milder ſort only, as Indian pink root, cowhage, (306.) powder of tanſey, (306.) aſa fœtida, (228.) rhubarb, (266.)—theſe promiſe to be more effectual than the more acrid.

Should it occur from ſevere cold, and any ſigns of life remain, the patient ſhould be removed into a moderately warm place—gentle friction ſhould be uſed—the feet bathed in warm water—and the conſtitution invigorated by pure wine, and warm cordials.

If from mental affections, medicines will avail but little—the chief that can be done is, to keep the natural evacuations regular, ſupport the ſtrength of the

ſyſtem, and recommend cheerful company—travelling —and change of air.

In general, our plan of cure will conſiſt of the moſt active ſtimulants and ſtrengtheners—emetics and briſk cathartics—with bliſtering and cupping, to which ſhould be had occaſional recourſe.

§ 2. PALSY—PARALYSIS,

from the Greek *paraluo*, abolito, vel diſſolvo, becauſe of the debility and apparent loſs of motion and ſenſe attendant.

It is ſaid to be an abolition or diminution of motion or ſenſe, or both, in one or more parts of the body.

When one ſide of the body is affected, it is called HEMIPLEGIA, from *emiſus*, dimidium, half, and *pleſſo*, percutio, to ſtrike or affect—when it affects the ſuperior or inferior parts of the body, tranſverſely above or below the diaphragm, (27.)—PARAPLEGIA, from *para*, trans, acroſs, and *pleſſo*.

When it affects any particular parts only, as the tongue, the lip, the eye-lids, &c. it is a *local palſy*.

Now all theſe depend upon the ſame cauſe, only it operates upon different parts of the nervous ſyſtem—for when one ſide is affected, a compreſſion of one portion of the ſpinal marrow, (17.) called crus, is the ſeat—when the interior parts of the body, or the legs and feet only, or the belly alſo, and all thoſe parts at the ſame time, which are ſituated below the diaphragm, the ſuperior parts remaining in a ſound ſtate; in the former, the ſpinal marrow about the firſt vertebræ of the loins, (26. 50.) is ſhook, or ruptured be-

yond

yond the middle of its ſubſtance—in the other, from the ſame vertebræ, it is totally flaccid through the whole inferior part of the ſpine, and altogether juiceleſs, ſo that between it and the bony cavity there appears a remarkable ſpace—or the ſpinal marrow may be affected much lower down, then the diſeaſe diſcovers itſelf by inability in walking, and great weakneſs of the legs and feet.

When *the arms and hands* are affected, the cauſe ſometimes fixes itſelf within the ſuperior vertebræ of the neck and back, or paſſes to the nervous parts of the arms, chiefly the wriſts.

And in *local palſy*, the nerves themſelves of the parts which ſupply the proper influence to them, in order to perform their functions, are affected; or, perhaps, in ſlight caſes, it may be owing to a defect of muſcular irritability; for we know, where, from obſtruction, or ſome other cauſe in the vaſcular part of the ſyſtem, by which the parts themſelves will not be properly ſupplied with blood, they are defective in, or loſe their motion—beſides, we know great cold will produce ſimilar effects.

DESCRIPTION. Generally before a part becomes paralytic, patients perceive a paleneſs there—numbneſs and heavineſs of the part—and a want of activity and quickneſs in motion—after this, the part or parts thus affected are deprived, in a greater or ſmaller degree, of the power of feeling, or motion, or both—they ſoon loſe their firmneſs, grow flaccid, and become cold—gradually waſting away—or are ſubject to a ſoft

a ſoft paſty ſwelling—the pulſe preſerves no regularity —moſt frequently it is ſmall, ſoft, and ſlow—ſometimes quick and unequal.—In the courſe of time, very often, nay, indeed, generally in that ſpecies where the whole ſide is affected, the memory fails greatly, as well as the power of reaſon—nay, indeed, ſometimes patients are totally deprived of both.

CAUSES. The *remote* or *inducing* are ſimilar, at leaſt many of them, to what occaſion apoplexy, ſuch as ſanguinary or ſerous fullneſs—ſuppreſſed evacuations—inebriety—ſpaſmodic colic—ſpaſms of the inferior parts—a congeſtion of water or matter among the membranes of the brain—wounds of the ſpinal marrow or brain—a retroceſſion of external eruptions—ſcorbutic acrimony—the diviſion of a nerve—ſudden fright—an injudicious exhibition and uſe, as well as the fumes, of mercury, arſenic, and lead—old age—convulſive epileptic diſorders—a flaccidneſs of the brain, and debility of the nervous ſyſtem—or touching, it is ſaid, the fiſh called *torpedo*—or, in fine, whatever can prevent the proper power of nervous influence, or deſtroy muſcular irritability—all which will produce the *proximate* or *immediate* cauſes, before recited, page 680, where alſo the characteriſtic ſigns are ſpecified.

CURE. Whatever may be the cauſe, our indications are, to endeavour to remove that which proximately, as well as more remotely, contributes to impede the due influence of the nervous power, by intercepting the influx of the fluid in the nerves, by which it is ſaid that influence is promoted; and attempt

tempt ſo to ſtrengthen the affected part, and the whole nervous ſyſtem, by which their ſtrength and activity may be recovered.

Now, as the hemiplegia and paraplegia ſeem to be ſo nearly allied to apoplexy, as they are occaſioned by the ſame cauſes, only differently ſituated, that they require ſimilar remedies, we ſhall therefore only mention them in general, and refer for farther particulars to what we have ſaid when ſpeaking on that ſubject—at leaſt for the recent attacks of the palſy---and theſe muſt be regulated by the nature of the conſtitution.

Such as bleeding in full habits—glyſters and purgatives, to continue copious alvine diſcharges for many days, (though in old people this muſt not be done) and bathing the feet in warm water---if accompanied with internal ſpaſms, and there ſhould be great commotions of the blood, diaphoretics of the milder claſs, as antimonials, (278.) joined with abſorbents, (296.) and ſpirit of vitriolic æther, (230.)---ſhould we ſuſpect the blood to be in too viſcid a ſtate in theſe complaints ſucceeding an apoplexy, myrrh, guaiacum, aſa fœtida, ammoniacum, (253.) joined with fixed alkalies, (287.) may be adminiſtered, and continued; and alſo chalybeate waters and liniment of ammonia, or ſoap, would, at the ſame time, rubbed freely down the ſpine, be of great uſe.

In ſerous caſes, and debilitated habits, emetics ſhould be given, from time to time, in a dilute ſtate, and taken gradually, (No. 11.) or ſtrong infuſion of horſe-radiſh or muſtard-ſeed, till their effects are produced as fully as required---and errhines, (241.) may be applied—ſetons may be cut, and iſſues, as

near

near the ſource from whence the parts are affected as poſſible;---and when the paraplegia ariſes from ſome injury in the vertebræ, and at the part there appears a projection, a cauſtic applied on each ſide of the vertebræ, and an iſſue made by that means, is often a certain remedy.

In more obſtinate ſpecies of theſe diſeaſes, in order to make a revulſion, and evacuate gradually thoſe humours from their origin, the ſtimulant aperient pills, (No. 142.) and volatiles united with ſome of the ſtimulant antiſpaſmodics, (228.) are recommended, taken in a decoction of the woods, (No. 88.)

With reſpect to external applications, in order to promote ſenſation and motion, volatiles—eſſential oils—balſam of Peru—dry frictions with rough cloths, or flannels impregnated with the fumes of ſome of the pungent gums, applied to the head, parts affected, and the ſpine, will be of uſe.

But the moſt capital and efficacious are the Bath waters—or, where they cannot be afforded, warm baths, ſprinkling, whilſt in the bath, upon the part affected, a ſolution of vitriolated iron. (210.)

Stimulating the parts with nettles has produced good effects, as well as electricity, particularly in local palſies.

The diet of the patients thus affected ſhould be of the warm aromatic kind, taking with their viands freely of muſtard, which alſo may be applied externally, and horſe-radiſh—drinking a glaſs of muſtard wine twice a day—or a table-ſpoonful of whole muſtard-ſeed may be adminiſtered in a glaſs of wine—

they

they ſhould uſe briſk exerciſe—ſleep moderately—and live in a warm dry air—cold muſt be avoided—and connubial indulgencies very rarely gratified.

When the palſy is the conſequence of ſome other complaint beſides the apoplexy, whether rheumatiſm, gout, ſcurvy, ſcrophula, colic, or the venereal diſeaſe, the mode of cure will require ſome variation, adapted to the peculiarity of the caſe.

Though theſe complaints frequently terminate fatally in a ſhort time, yet they ſometimes continue for a ſeries of years. When the ſenſe of feeling remains, there is much more probability of a certain recovery than in caſes where both motion and ſenſation are loſt. A palſy of the lower extremities and abdomen is for the moſt part fatal, and often attended with a mortification of the diſeaſed parts.

Should the part, however, be painful, have perception, retain a degree of warmth, and does not waſte away, or a tremor comes on, there may be ſome expectations of a recovery; but more particularly if a ſenſation of creeping or pricking be perceived—ſometimes febrile affections coming on have been the means of curing the complaint—and a looſeneſs has been of evident advantage tending to the ſame end.

SEC.

SECTION XVII.

MADNESS—INSANIA.

THIS is divided into two ſpecies—MANIA, *furious madneſs*, and MELANCHOLIA, *gloomy madneſs*. Notwithſtanding which diviſion, authors have conſidered them only as different degrees of the ſame diſeaſe; which is defined an alienation of the mind, or deviation from the rules of ſound reaſon—or a conſtant delirium without fever.

This doctrine has been long given us by ARETÆUS and TRALLIAN. The *former* aſſerts, that melancholy is the beginning and origin of mania, into which it glides more from increaſe than any other cauſe—the *latter*, that mania is nothing more than melancholy brought to a greater degree; as, on account of their cloſe connection, the tranſition becomes extremely eaſy from one diſeaſe to the other. And HOFFMAN, imbibing this opinion, advances, that from attentive practice and obſervation we learn, that both diſeaſes ariſe from the ſame origin and containing cauſe, and vary only in degree and time of invaſion, ſo that melancholy may be juſtly received as the primary diſeaſe, but mania as its exacerbation and accidental effect—which connection daily and very cloſe obſervation confirms; for melancholic people, particularly if the diſeaſe has been of long ſtanding, very readily fall into mania; which ceaſing, melancholy returns again; although afterwards,

wards, at certain periods, they will again be viſited by mania.

DESCRIPTION. The MELANCHOLIC are thus affected—they appear ſad, dejected, dull, without any real cauſe—they are ſeized with fear and trembling—encouraged with difficulty—are watchful—love ſolitude—prone to anger, and mutable—enquiring after the moſt minute trifles—covetous, but ſoon after ſimple and profuſe—their habits are coſtive; ſometimes having no ſtools at all; ſometimes they are round and dry, ſurrounded with a black bilious fluid—they make ſmall quantities of urine, and that acrid and bilious—have great flatulence at the pit of the ſtomach—putrid eructations, fœtid and offenſive; and ſometimes a ſharp liquid with bile is rejected—the face is pallid—the pulſe is ſmall, dull, and weak—and the ſick are at meals extremely voracious.

The MANIACAL, rouſed to anger, are wild with rage—ſome run a great way—ſome bawl out violently—ſome fly from the ſight of men into ſolitude, and only converſe by themſelves—ſome cut and tear their limbs.—In the height of the diſeaſe, during ſleep they are diſturbed with viſions, are immoderately laſcivious, and openly, without fear or ſhame, gratify their deſires—but when the diſeaſe abates, they are quiet, ſtupid, and ſorrowful—alſo, coming to the knowledge of their malady, they are oppreſſed with grief at their own calamity and miſery.—Theſe are the ſymptoms which denote the preſence, or declining ſtate of mania. The following are ſuch as appear previous to the attack,

tack, at leaſt a few of them which have been pretty conſtantly obſerved.

The eyes are red and ſuffuſed with blood—there is an irregular vibration of the eye-lids—their uſual mode of conduct is altered—pride manifeſting itſelf in their countenance, voice, and geſtures—they grind their teeth—conceive a hatred for this or that particular perſon—get little ſleep—have violent head-ach, with quickneſs of hearing—ringing of the ears, and muſical ſounds. To this place is worthy to be referred the remarkable ſtrength of limbs, and incredible capability of bearing cold, of which maniacal ſubjects, in the increaſe of the diſeaſe, are poſſeſſed; alſo in women, the collection of blood in the breaſts. *Beſides*, people afflicted with madneſs are not ſubject to be affected by any epidemical diſeaſe; and are often cured of other complaints under which they labour, or have their progreſs ſuſpended during their ſtate of inſanity.

The greateſt part of this deſcription, exact and elegant as it is, has been handed down from ARETÆUS, and copied by moſt of the moderns:—and in examining the whole of the ſymptoms, it will ſtrike us pretty clearly that they muſt flow from ſome affection of thoſe parts which are conſidered as the ſeat of perception, ſenſation, and voluntary motion; and theſe are the different portions of the brain. Even from HIPPOCRATES the idea may have been ſaid to be borrowed, "for," ſays he, ſpeaking of the brain, "from this part derive we wiſdom, and underſtanding, hear, ſee, and know good from bad; and alſo from this are we inſane."

CAUSES.

CAUSES. Thoſe which are conſidered the *remote* or *inducing* are, *mental* or *corporeal*—the mind being too ſtrongly, or too long continued fixed upon one object—grief, fear, hope, joy, particularly love, totally abſorbing the faculties of the mind—ill-founded dread of Divine vengeance, from the falſe principles of religion; —the membranes of the brain indurated—dryneſs of the brain—or where the diſeaſe is hereditary—too ſedentary a life—poiſons poſſeſſed of a ſtupifying power —immoderate libidinous exceſſes—ſuppreſſion of natural or proper evacuations—and ſometimes it is the effect of preceding febrile diſeaſes.

The *proximate* or *immediate* of *melancholic affections* may be placed to the too great appulſe of thick blood, to the weakened and flaccid brain, and its ſtagnation and difficult progreſs—*but the origin of mania*, and *foundation*, to the more violent and impetuous motion of the thick and melancholic blood through the veſſels and fibrillæ of the brain, or parts of the brain; whence ariſes, on the one hand, too weak influence, on the other, too ſtrong, of the nervous energy.

CHARACTERISTIC SIGNS. MELANCHOLY, or GLOOMY MADNESS, is ſaid to be a partial inſanity without indigeſtion; or a difficulty of digeſtion being a concomitant ſymptom; for we ſay people are inſane, when the relations of things altogether falſe are conceived in the mind, ſo that either the paſſions or actions of mankind may be exerted irrationally, or not within the limits of reaſon—and it is called partial, becauſe melancholic people will do many things, and think on many points, not with proper or well-regulated judg-

ment; yet in ſome they act and think with ſome degree of ſound reaſon.

MANIA, or FURIOUS MADNESS, is univerſal inſanity, where the whole ideas are ſo generally deranged, that no act, or thought, is conducted within the bounds of cool and deliberate reaſon.

CURE. All ſpecies and degrees of madneſs which are hereditary, or which grow up with people from their early youth, are incurable; and ſo, *for the moſt part*, are all maniacal caſes that are above a year's ſtanding, originate they from whatever ſource they may.

Very often the remains, or dregs of ſome particular diſeaſe, as intermittents, ſmall-pox, nervous fever, give riſe to different degrees of fooliſhneſs, or madneſs, termed *amentia*—the cure in this caſe muſt be attempted by nouriſhing diet, clear air, moderate exerciſe, and the uſe of wine; not by evacuations, which in almoſt all other caſes of inſanity are generally thought neceſſary, unleſs the conſtitution of the patient be ſuch as abſolutely to forbid them.

And here we muſt inquire what kinds the patient can bear beſt; and theſe ſhould be proportioned to his ſtrength; elſe, from being violent, though they may, perhaps, cure furious madneſs, they will be apt to bring on incurable dejection of mind, and melancholy.

If patients, therefore, are of a ſtrong habit of body, full, and ſymptoms of mania from melancholy make their appearance; or, in the earlier ſtages of melancholy, the veſſels ſhew ſigns of plenitude, bleeding may be had recourſe to, either in the arm, jugular vein,

and

and ſometimes by cupping, if any affection of the head requires it; or, ſhould the patient's weakneſs forbid the taking away much blood, leeches may be applied to the temples.

In recent caſes though this is generally attended with moſt ſucceſs; but if of ſome continuance, ſimilar advantages have not been derived from it.

In melancholy, however, bleeding muſt be ſparingly uſed—in mania more freely—and ſome conſider opening a vein in the arm ſufficient—bleeding the patient in an erect poſture till near fainting—which proves ſome diminution of the fullneſs of the veſſels of the brain taking place.

Vomiting, in weakly people, with ipecacoanha, (259.)—in the more robuſt, with antimonial wine, or tartarized antimony has been thought preferable, (259.) —in mania it may be a doubtful remedy, by determining too freely to the head—in melancholy it may be more freely uſed.

Purging is extremely uſeful—the moſt efficacious cathartics have by ſome been thought infuſion of ſenna, (No. 106.) quickened with one or two drams of the tincture of jalap, inſtead of tincture of aloes and ſenna —but the frequent uſe of cooling purges have, from experience been recommended. (No. 147, 148.)

But ſhould there be an obſtruction of the menſes in women, or the piles in men, a reproduction of theſe evacuations are thought neceſſary—the aloetic purges, (266.) (No. 106. 108.) then will be the moſt proper—and theſe evacuations by vomit and ſtool require to be alternately repeated.

Diuretics have been conſidered by ſome of the greateſt moment, eſpecially if any degree of fever ſhould accompany inſanity—but this will happen more in maniacal caſes; for melancholic ſubjects, for the moſt part, make too much water—the moſt proper diuretics are, the vegetable alkali prepared, (297.) and the diuretic ſalt, (272.) and theſe may be given in large doſes alternately, two or three times a day.

Beſides theſe, diſcharges by the pores of the ſkin are to be promoted.

HOFFMAN particularly recommends the warm bath, who has ſeen numerous inſtances of melancholic and maniacal caſes cured by this means. Dr. CULLEN is of a contrary opinion, and has found it rather hurtful to maniacs—though to rigid melancholic habits it may be uſeful—or exhibited in form of a partial half bath, pouring at the ſame time cold water upon the head and ſuperior parts of the body.

From camphor having been ſaid to prove ſucceſsful in forming radical cures, Dr. LOCKER gave it in large doſes, but without ſucceſs—though he found camphor diſſolved in vinegar had good effects—he thought then the efficacy might depend upon the vinegar—he gave one ounce and a half of diſtilled vinegar every day, after having firſt prepared the patient by bleeding and purging, which he ſometimes occaſionally repeated—eight by this method, and none of them took more than from ſix weeks to three months, had the cure completed. He recites the following effects—ſoon after they began the uſe of vinegar—*their eyes loſt their wild ſtaring look, and preſently after became calm and quiet*

quiet---it acted chiefly by ſweating; and the more they ſweat, the ſooner they were cured---the menſtrual diſcharge in ſuch as were obſtructed, or had too little of this ſalutary evacuation, *was promoted or increaſed.* From this account, and from the ſimplicity of the medicine, it ought certainly to undergo farther trial.

Bliſtering the head has been thought uſeful—and, perhaps, it may, ſays Dr. MEAD, in caſes of long ſtanding; but, in preference, he recommends ſhaving the head after the manner of the ancients, and rubbing it often with warm vinegar; and alſo paſſing a ſeton in the nape of the neck. Dr. CULLEN is of a contrary opinion, for he ſays, "in recent caſes, bliſtering the "head has been found uſeful in inducing ſleep; and "when it has this effect, the repetition is proper—but "in maniacal caſes that have laſted for ſome time, "bliſtering has not appeared to be of any ſervice;"—and in ſuch caſes he has not found perpetual bliſters, or any other form of iſſue, prove ſucceſsful.

However, ſetons and iſſues I conſider in all caſes of mania extremely ſerviceable, by preventing a fullneſs coming on the habit, from the conſtant drain, and this in an eaſy and gradual manner.

A frequent uſe of the cold bath in caſes of mania is very ſerviceable;—for CELSUS ſays, nothing is ſo beneficial to the head as cold water. In order, though, to render this remedy the moſt effectual, the maniac ſhould be plunged into the cold bath by ſurpriſe, and detained in it for ſome length of time, frequently pouring cold water upon the head; ſo, with the aſſiſtance of fear, a cooling effect may be brought on—this has

often been uſeful; as has alſo the application of ice, ſnow, or the clay-cup to the naked head.

To procure reſt, Dr. MONRO uſed to give two drams of borax—camphor, muſk, and other medicines of that claſs, have been preferred to opium, in order to procure ſleep; for in maniacal caſes opium is uſually forbidden—but there are inſtances, where, in large doſes, it has proved a cure—and, perhaps, if it were tried oftener, more powerful effects might be derived from it—and after large evacuations and proper bleeding, and where there was no appearance of inflammatory affections of the brain attending mania, and the patients were reſtleſs, I ſhould not heſitate in having recourſe to it, for two or three times; which, ſhould it be found to exaſperate the diſeaſe, might be eaſily left off—if otherwiſe, the effect would authorize the purſuit.

Conſtant and hard labour has been recommended; becauſe it is ſaid, forced attention is a very certain means of diverting the mind from purſuing any train of thought; and from hence its utility—alſo a journey carried on for any length of time; during which, complete cures of mania have been known to be effected, from diverting the attention from diſagreeable and painful affections.

Theſe are the remedies which are generally applied in caſes of mania, or in ſuch caſes of melancholy as ſeem to be approaching to that ſtate—but there are ſome deviations neceſſary to be obſerved where inſanity is in its primary ſtate, without ſuch apparent tendency.

In

In both caſes, however, coſtiveneſs ought to be avoided, by the uſe of gentle aperients, particularly in melancholy, the draſtic purges are better omitted.

Blood-letting will here be ſeldom neceſſary, except under the particular circumſtances before ſpecified. (p. 690.)

Warm bathing is alſo preferable to cold bathing; becauſe we conſider here the nervous ſyſtem in too torpid a ſtate, and requires the fluids to be ſolicited externally, and not thrown too much internally, leſt want of proper incitability of the nerves ſhould permit the internal parts to be too much loaded, from the veſſels being incapable of producing re-action adequate to the external force.

Nor ſhould opium in caſes purely melancholic be had recourſe to; for the action of its ſedative power would contribute to add much to the nervous torpor.

The diet in maniacal caſes ought to be perfectly light and thin, and ſuch as is neither ſtimulating nor nouriſhing—hence vegetable diet is the moſt proper—but ſhould in melancholic caſes be uſed with caution, as, where the ſtomach is torpid, ſuch viands are apt to occaſion ſymptoms ariſing from indigeſtion.

As nothing is more conducive to the recovery of patients labouring under inſanity than proper management, to this point much attention ought to be paid; and in the two ſtates of the diſeaſe different modes ought to be adopted.

The violence of the mania is to be reſtrained, and the deſpondency of the melancholic to be diſſipated—*the former* we are to keep in ſubjection by chiding

and threatening—and it muſt be remembered, that mad people are always cowardly, and can be awed by the look of a very expreſſive countenance—and when thoſe who have the charge of them once can impreſs them with the notion of fear, they will readily ſubmit to any thing required—and this is much better, and infinitely more humane than beating them, or chaining them down in dark cells or rooms, as was formerly the cuſtom when they were outrageous—the ſtrait waiſtcoat, or tying their legs down to the foot of the bed, if the former ſucceeds not, will be ſufficient for preventing them from injuring themſelves or others.

The latter ſhould be encouraged and ſoothed, and diverted by concerts of muſic, or any other pleaſing entertainment, in which they have been known to take delight whilſt in their rational ſtate.

A miſtaken humanity often prevents the friends of unfortunate inſane people from putting them under the care of ſtrangers, and ſending them from home—this, however ought to be complied with; for, whilſt at home, and amongſt their friends, the cauſe and continuance of unpleaſing ideas are apt to be too frequently renewed, and ſubjection is infinitely more difficult to be acquired; ſtill, the prevention of the one, and the attainment of the other, are eſſentially neceſſary.

In theſe caſes the head is apt to be affected with fullneſs; therefore, where circumſtances will permit, the patients ought to be kept as much in an erect poſture as poſſible—indeed, ſhould there be no perceptible ſymptoms which indicate ſuch a preternatural fullneſs, or an increaſed force of the blood-veſſels in the brain; for

for an horizontal poſition always augments the fullneſs and tenſion of theſe veſſels, and therefore may increaſe the too-powerful action of the brain.

To prevent a relapſe, which is very apt to recur, the plan of medicine and diet here laid down ought to be repeated for a conſiderable time, at proper intervals, after the patient has recovered—and chalybeate waters and the cold bath will alſo be highly proper, to ſtrengthen the whole frame, and prevent a return of this unhappy diſeaſe—from which to relieve our patients muſt afford ſatisfaction inexpreſſible.

SECTION XVIII.

AFFECTIONS OF THE LUNGS.

§ 1. Common Cough, or Tussis.

THIS complaint is ſo common, and ſo often experienced by almoſt every individual, that a minute deſcription ſeems unneceſſary; but as from neglect it may be, and is frequently, attended with diſagreeable conſequences, it will be uſeful to ſee how theſe originate, in order to ſhew the neceſſity of attending to this complaint, though apparently trivial, and taking it off by the readieſt and eaſieſt means, in order to prevent ſubſequent miſchief; — to this, which is occaſioned by what is called catching of cold, and the hooping,

hooping, or convulſive cough, we ſhall confine ourſelves.

And of the firſt we ſay, a cough is a concuſſion of the lungs repeated at uncertain periods, induced by ſome irritating cauſe acting on their internal ſurface, or that of the windpipe, (20.) occaſioning quick reiterated action of the muſcles of the ribs, diaphragm, (27.) and belly; and this irritating cauſe by ſome means obſtructs perſpiration, and determines the matter, which ſhould paſs off by the perſpirable pores, too freely to that organ, or part leading to it—and chiefly, as it is termed, from catching cold, for the moſt part attended with hoarſeneſs—running of the noſe—ſneezing—chillneſs—and ſometimes with ſlight degrees of febrile affections. People thus affected generally cough up mucus from the lungs, now and then of a yellowiſh colour, and viſcid; which, when expectorated, puts a period to the fit of coughing for that time.

From what has been ſaid, the indications of cure will be obvious.

To remove the irritating cauſe, and guard the lungs, ſo that, till it is removed, they ſhall not feel too ſenſibly the effects of that ſtimulus—and theſe are performed by reſtoring perſpiration—evacuating the morbid mucus—ſheathing its acrimony—rendering the lungs inſenſible to its effects—and giving proper ſtrength to the veſſels of the lungs; for, by the repeated ſhocks and diſtenſion, they become debilitated.

And theſe will be accompliſhed, for the moſt part, by very eaſy means—by avoiding cold—keeping the breaſt

breaſt warm, by wearing flannel over it—drinking warm liquids in the morning, and at meals warm water, or inhaling the vapour—taking the compound decoction of barley, linſeed, or bran tea, with honey and nitre—or drinking at night barley-water, ſweetened and warm, in which is diſſolved the yolk of an egg, or taking any gentle diaphoretic, (275.) or ſmall doſes of antimonial powder, (278.)—theſe, or ſome of theſe, early applied, will readily prove effectual.

But ſhould the complaint be obſtinate and violent, bleeding may be neceſſary, and a ſpare diet—ſaline, and antimonial medicines may be given, (No. 6 to 9.) to which may be added camphorated tincture of opium, (233.) or nitrous medicines, (No. 2.) may be joined with antimonials, and ſome of the liquids before ſpoken of adhered to—the body ſhould alſo be kept open, and the urinary diſcharge promoted, by gentle aperients and diuretics—linctuſſes and emulſions, (No. 81 to 84.) may alſo be occaſionally adminiſtered; and are very uſeful, if ſwallowed gradually, particularly ſhould there be a tickling upon the top of the windpipe, which ſometimes appears to be the principal cauſe of a cough, eſpecially in the beginning.

At the latter end of the complaint, if the cough ſhould continue, though not violent, but come on now and then, and there ſhould be expectorated tough, viſcid mucus, the ammoniacal mixture, (No. 141. 143.) given three or four times a day, I have found ſerviceable, not only in promoting an eaſy expectoration, but ſtrengthening the veſſels of the lungs—and where I find

find people ſubject to frequent returns, after the cure, benefit may be derived in the prevention, by bark given twice a day for a little time.

During the ſeverity of the complaint the patient ſhould be adviſed to keep much within doors—avoid the night air—be rather warmly cloathed—particularly keep the feet warm—and by theſe means ſucceſs is certain.

But ſhould the complaint be long neglected, from the repeated ſtreſſes laid upon the lungs by continually coughing, hard glandular tumors, called tubercles, are *not rarely* formed—ſometimes the veſſels of the lungs are ruptured, by the blood being ſo often too forcibly thrown into them—in both of which conſumptions have been the conſequence—the cough then begins to put on another aſpect, and induce a diſeaſe of a very ſerious nature; for the relief of which the reader is referred to Pulmonary Conſumption. (524.)

§ 2. Hooping, or Convulsive Cough.

It is ſo called from the violence of the concuſſions, and that particular noiſe or hooping which is obſervable in the fits of coughing—alſo CHINCOUGH, from the Dutch word *kincken*, to pant—in medical language TUSSIS CONVULSIVA, or PERTUSSIS.

DESCRIPTION. In the beginning chiefly there is a dry cough, in which there is not thrown up any, or a very ſmall quantity of thin ſerum, more or leſs acrid—ſometimes the cough is moiſt, and then a blackiſh or blue mucus, often extremely tenacious, is evacuated—at the ſame time, the extremities

mities grow cold—the bowels are coſtive—the urine is thin—and the blood is forced up copiouſly, and with great force, into the ſuperior parts, breaſt and head; from whence, during the fit, the face grows turgid with blood—the veins ſwell—the arteries beat ſtronger and quicker—the eyes appear prominent—the tears flow—the eye-lids puff up—and ſometimes the blood, particularly if a ſneezing comes on, is forced out from the noſtrils—ſometimes the veſſels of the lungs are ruptured, and there ariſes a ſpitting of blood—a hic-cough often accompanies it, and very often vomiting. —With reſpect to the convulſive affection, it does not appear generally till the ſecond or third week from the attack; 'till that time, it appears like a common cough, and then it comes on at different times of the day, and continues till ſome mucus is thrown up by the lungs, or the contents of the ſtomach evacuated, and then it ceaſes—when it has put on theſe appearances, its time of continuance is uncertain; it may go off in a few weeks, or remain ſome months.—Before the fits come on there is ſome warning given, chiefly an uneaſy ſenſation in breathing, and children will at this time catch hold of any thing that is near them, in order to ſupport themſelves during the fit of coughing, which they dread.

But there are ſome caſes where this ariſes from a peculiar infection, that appears only like a common catarrh—ſtill it is moſt commonly, indeed, almoſt always, with a peculiar kind of ſound, different in different caſes, during ſome parts of the coughing called *hooping*, occaſioned by many expirations being convulſively made,

made, rapidly ſucceeding each other, whence a great quantity of air muſt be thrown out of the lungs; which circumſtance neceſſarily requires a full inſpiration to ſucceed—in this act the air ruſhes with unuſual rapidity through the ſuperior part of the windpipe, and occaſions that particular noiſe, which forms the ſtriking and characteriſtic marks of the diſeaſe.

Various have been the opinion of authors reſpecting the ſeat of this diſeaſe—but if to what we have ſaid, the occaſional or accidental cauſes, which are apt to bring on the fit, be added, ſuch as violent exerciſe—full meals—food difficult of digeſtion—irritation of the lungs from ſmoke, duſt, or diſagreeable odours—ſtrong paſſion—or other conſiderable emotions of the mind—the relief occaſioned by vomiting or expectoration of mucus freely, and the propenſity to coughing being leſs when the ſtomach is empty—we ſhall not heſitate in concluding the lungs or the windpipe are the parts of the conſtitution affected; and that prediſpoſition in the parts to feel the effects of peculiar infection form the immediate cauſes of the diſeaſe, and alſo authoriſe us to ſay,

That the HOOPING-COUGH is a reiterated and violent concuſſion of the pulmonary organs, induced by the convulſive action of the muſcles of ribs, diaphragm, and belly, brought on by the ſtimulus of peculiar infection acting upon the lungs or windpipe, attended with a ſenſe of ſtrangulation, repeated ſonorous inſpiration, and often with vomiting and expectoration.

CURE. The indications of which are, to correct or evacuate the peculiar infectious matter—to alleviate

and

and leſſen the violence and duration of the cough—and prevent thoſe miſchiefs which are likely to ariſe in the habit, or parts of it, from its exceſs.

But as we know of no means either to correct or clear the conſtitution of the morbid matter creating the diſeaſe, on theſe we can make no attempt—we muſt therefore imitate nature in her efforts, by ſuch means as experience, founded on the knowledge of the laws of the animal œconomy, will point out to us, in accompliſhing the two ſucceeding indications.

In full habits, therefore, if the face ſwells much in coughing, looks red, and alſo the eyes, and other appearances of local plenitude ſhew themſelves, bleeding is eſſentially uſeful; and this muſt be repeated ſo long as ſuch appearances render it neceſſary—but this muſt not be puſhed too far; for then we ſhould increaſe the convulſive affection—hence, in the ſlighter kinds of this diſeaſe it may be omitted—the body ſhould be kept moderately open, not leſs than two or three ſtools procured every day—violent purging, for the reaſon above recited, might be hurtful.

Gentle vomiting every day is beneficial in the forenoon, by ſmall doſes of antimonials, one or two ſpoonfuls of the emetic mixture, (No. 11.) for a doſe, or as much as will produce the effect—and ſhould any feveriſh ſymptoms attend, a quarter or half a grain of tartarized antimony may be given at night with the powder, (No. 2.) leſſening or increaſing the doſe according to the conſtitution; for this mode not only does good by the ſhock it gives to the habit, aſſiſting expectoration, and clearing the ſtomach, but by de-

termining the fluids to the ſurface, promoting perſpiration, and keeping the body open; which laſt if it does not do, a little magneſia, or ſome other cooling purgative muſt be added—by perſiſting in this mode, till evident ſymptoms of amendment preſented themſelves, then omitting the vomit to every ſecond or third day, afterwards giving it once or twice a week, has been crowned with deſired ſucceſs.

But, notwithſtanding, ſhould ſymptoms appear indicative of an inflammatory tendency on the lungs, which will be ſhewn by difficulty of breathing, fever, and quick pulſe, where no coughing for ſome time has preceded, bliſters then ſhould be applied, particularly on the cheſt.

Rubbing the pit of the ſtomach, and down the ſpine, with equal parts of rectified oil of amber and ſpirits of wine, where there has been no inflammatory ſymptoms, or febrile tendency; or after theſe had gone off, has been conſidered of great uſe; but bleeding and purgatives, when neceſſary, have preceded their uſe.

Small doſes of hemlock, (233.) have been given with apparent ſucceſs; and is by much the beſt amongſt that claſs ſtiled ſpecifics.

Towards the cloſe, where mucus appears viſcid, and difficult to expectorate, the ammoniacal mixture, (No. 141. 143.) is not an unprofitable medicine.

The ſtimulating tonic mixture, (No. 144.) has been ſpoken of with exaggerated praiſe, but I think too indiſcriminately—early in the diſeaſe I would never recommend it, particularly in full habits with an in-

flammatory

ſlammatoy tendency—though in the later ſtages, where evacuants have preceded, I have given it with apparent advantage—and, perhaps, in weak, delicate conſtitutions, it may be exhibited at an earlier period in ſmall doſes two or three times a day, till a ſlight ſtrangury is excited—the doſe may either be diminiſhed, or given at longer intervals.

However, in the general mode of management, I ſhould, in the beginning, recommend vomiting and aperients, with bleeding, bliſtering, and uſe of antimonials, if neceſſary—ſmall doſes of cicuta—and where no febrile ſymptoms declared themſelves, external antiſpaſmodics.

When the ſymptoms had conſiderably abated, tonics, particularly bark, ſhould ſupply their place.

And, in the firſt period, the diet ſhould be abſtemious and ſparing, as in inflammatory fever, if the ſymptoms ran high.—In the ſecond, the mode of living ſhould be more generous—and ſhould the lungs be weakened by the violence of the diſeaſe, a courſe of aſs' milk, riding exerciſe, pure, clear air, and the uſe of bark, would be proper.—Indeed, in ſome caſes, change of air is highly neceſſary, and very often alone produces the moſt ſalutary conſequences.

We muſt obſerve here, that often, when the coughing fit is over, the patients are almoſt always perfectly relieved; but ſhould they not, and the difficulty of breathing ſhould continue, and there be any conſiderable febrile affections, there is danger, which muſt ever be ſuſpected; for few die but under theſe circumſtances—now and then bringing on immediate ſuffoca-

tion, and ſometimes conſumption—and often attended with extremely troubleſome and painful affections; but it will ſometimes occur in ſo mild a ſtate, that all fear is unneceſſary—and this will manifeſt itſelf by the gentleneſs of the ſymptoms; for though the complaint ſhould be completely exiſting, accompanied with its certain ſymptoms of convulſive cough and hooping, if theſe ſhould be moderate, and their returns obſerve diſtant periods—if the ejection of mucus from the lungs ſhould be in no great degree—the difficulty of breathing and febrile affections do not manifeſt themſelves—and between the fits the patient preſerves his common habits of health, and the ſymptoms gradually decreaſe, nature will be her own phyſician—in theſe caſes little is neceſſary to be done.

§ 3. ASTHMA.

from the Greek word *ao* vel *aemai*, anhelo, to breathe with difficulty. Though authors have divided this diſeaſe into different ſpecies, they may all properly come under one head, conſidering them, as they truly are, the ſame, only differently circumſtanced; or ariſing from other diſeaſes in the habit, and merely ſymptomatic; we ſhall therefore conſider them under one head, as aſthma in its different ſtates, whether periodical, continual, or acute.—If the difficulty of breathing returns periodically, it is termed ASTHMA—if it is chronic or continual, DYSPNÆA, from the Greek word *dys*, difficulter, and *pneo*, ſpiro, to breathe—if it is acute and violent, comes on ſuddenly, and ſoon terminates, and returns not again, ORTHOPNÆA, from

orthos,

rthos, rectus, upright, and *pneo*, ſpiro, becauſe the patients can only breathe in an erect poſture.

DESCRIPTION. Before the difficulty of breathing comes on, patients complain of a tightneſs in the region of the ſtomach, which is diſtended, and wind paſſes in conſiderable quantity upwards—they then begin to be hot—are heavy and dull—complain of a pain of their head—are ſick, and make a quantity of pale urine—their ſpirits become depreſſed—the lungs feel a degree of inactivity and ſtiffneſs—the breaſt is more than commonly loaded—they grow hoarſe—are ſick—breathe with great difficulty—and experience almoſt univerſally a kind of ſtupor—from the contracted ſtate of the cheſt, inſpiration and expiration are performed ſlowly—and, indeed, ſo uneaſy are they in the execution, that they elevate their ſhoulders, and extend their necks, in order to get relief in their manner of breathing—very frequently they vomit materials of different kinds—ſometimes viſcid ſlimy mucus—ſometimes green or yellow bile—in the violence of the fit, they have a palpitation of the heart, a livid colour of the face, and feel as if they ſhould be ſuffocated—when the ſpaſmodic conſtriction remits, they ſpit up viſcid phlegm, which taſtes differently, intermixed with which are black coloured ſtreaks—the urine now changes its colour to a deeper hue, and depoſits a ſediment—all the ſymptoms increaſe at night, and are worſe in bed—patients feel moſt alleviation in the open air—as ſoon, however, as the paroxyſm goes totally off, the expectoration ceaſes.

From this account, though conciſe, it appears, that whatever will impede the paſſage of the air into, or the free circulation of blood through the lungs, either by affecting the lungs themſelves, or diminiſhing the capacity of the cheſt, will produce this complaint—hence the *remote* or *inducing* CAUSES are, thick, denſe, foggy air—or air impregnated with noxious particles or vapours received into the lungs—the aperture of the glottis, (the narrow ſlit at the upper part of the windpipe,) being ſo contracted, or cloſed up, and the paſſages leading to it from the parts about the fauces being much ſwelled, and the inveſting membranes covered over with a mucous or purulent exudation; or themſelves greatly thickened; or the aperture may be ſhut by the muſcles of the windpipe being affected with ſpaſmodic contractions, which is not ſeldom the caſe—accumulations of watery, purulent fluid collected in the cellular ſubſtance—earthy concretions, or ſchirrous tubercles formed in the lymphatic glands diſperſed through them—tumors lying contiguous to, or adjoining the lungs—extraordinary quantities of fat collected in the cheſt, particularly about the large blood-veſſels—too copious ſecretion, or a deficiency of the mucus which lubricates the branches of the windpipe—blood iſſuing from the extremities of the arteries into the air veſſels—by an over diſtenſion of the blood-veſſels in the lungs—ſpaſmodic affections or pain affecting the muſcles deſtined for reſpiration, eſpecially the diaphragm, (27.)—ſpaſmodic contractions of the branches of the windpipe from internal

cauſe,

cauſes—collections of water, blood, and matter within the cavity of the cheſt—ſwellings of the belly from dropſical collections—enlarged viſcera—or from a fœtus—and, indeed, from an unnatural ſmall-formed cheſt—ſtrong paſſions—old ulcers healed—any accuſtomary or critical evacuation thrown back into the habit—wounds of the diaphragm—with a variety of others—and according to the nature of the acting cauſes, ſo ſhall we find the nature of the diſeaſe—but as in a work of this kind we cannot go into the minute particulars, we ſhall confine ourſelves to two; of one or other of which almoſt all aſthmatic complaints conſiſt, viz. the *humid* and *ſpaſmodic*; or *convulſive*.

CHARACTERISTIC SIGNS. A difficulty of breathing, with ſtraightneſs of the cheſt—ſometimes continual, at others periodic—and ſometimes acute, violent, and not ſubject to return.

DISTINCTIONS. Such as are affected with the humid, or moiſt aſthma, are ſeldom free from cough, and, before the acceſſion of the fit, they have ſome ſigns indicating its approach, as languor—loſs of appetite—oppreſſion—a flatulent fullneſs of the ſtomach—after theſe there comes on a violent difficulty of breathing—there is no certainty of the duration of the fit, as it is from a few hours to three, four, or more days—ſtill the ſenſe of ſuffocation and difficulty of breathing is ſo diſtreſſing, that the patients are ſcarce able to lie, ſpeak, or expectorate--yet an inflammation of the lungs ſeldom ſucceeds the fit, notwithſtanding there appears ſuch violence affecting that organ—as it terminates, the breathing begins to be more

free---mucus is expectorated---the urine changes to a darker colour, and depoſits a copious ſediment.

From the humid aſthma, the dry or convulſive is diſtinguiſhed, from the ſuddenneſs of the attack---a pain and cramp affecting ſome part of the breaſt, particularly if any part of the breaſt has been injured formerly by a wound or blow---from the violence of the ſymptoms---but the moſt certain ſign is ſaid to be, if a convulſion of any other part be preſent, or has preceded.

Indeed, both theſe ſpecies may be conſidered, and not improperly, of the nervous claſs; one having aſſociated with it an accumulation of viſcid phlegm in the lungs, the other free from ſuch a congeſtion.

CURE. In full ſtrong habits, in fits of the aſthma, bleeding may be had recourſe to; and, if the conſtitution will bear it, and the continuance of the violence of ſymptoms require it, it may be repeated—but in thoſe which are delicate and debilitated, or far advanced in life, it is more judicious to omit it---as ſoon as poſſible afterwards, the glyſter, (No. 26.) in which from a half to a whole dram of aſafœtida, or more, may be diſſolved, ſhould be adminiſtered---and if theſe do not in a ſhort time prove efficacious, a bliſter ſhould be applied between the ſhoulders.

Vomits ſhould be adminiſtered, (No. 11, 12. 38.) either will anſwer the purpoſe; but not till expectoration comes on with ſome degree of freedom; for, in the height of the fit, they might produce miſchief, by creating too great an accumulation of blood in the head, and occaſion not only dangerous, but fatal ſymptoms---

indeed,

indeed, if the ſtomach is loaded with any kind of foulneſs, vomiting will often prevent the aſthmatic fit.

A ſtrong infuſion of roaſted coffee has been known to alleviate the fit.

In order to promote expectoration, emetics ſhould from time to time be given, and compoſitions formed of the attenuating gums, (No. 141. 143. 145.)

Garlic is uſeful, (253.) or extract of tobacco, (234.) is ſuppoſed to be capable of being ſo managed as to exceed all the reſt of our medicines for this purpoſe: for tobacco chewed by thoſe unuſed to it till it has brought on ſickneſs, and then going to bed to ſweat; afterwards repeating it, has, we are told, cured the fit.

Squills, (272.) mixed with other expectorants, (252, 253.) increaſe their power, or are themſelves active; and alſo ſoap mixed with the gums before mentioned.

And in all caſes where the body is coſtive it ſhould be kept gently open; for which purpoſe the pills, (No. 108, 109.) may be uſed.

If opiates dare be adminiſtered in the humid aſthma, they ſhould always be coupled with expectorants and volatiles---to which end, drops of opiated tincture and ſalt of hartſhorn may be added to the fœtid attenuant mixture, (No. 145.) for theſe may prevent the opiates from making the mucus too viſcid, or hindering expectoration from going on.

Diuretics are alſo beneficial, particularly in thoſe who have an acrimonious ſtate of fluids.

Though very great caution is neceſſary in the humid aſthma in our exhibition of opium, yet in the ſpaſmodic ſpecies it may be given with more freedom;

though it ſhould be joined with ſuch aperients as will keep the body open.

Cold bathing in an artificial ſalt bath, or in the ſea, which is the moſt eligible and certain, has proved efficacious in thoſe aſthmas, where, from the prediſpoſition in the lungs to become irritable from ſlight cauſes, this complaint was brought on, except ſome peculiar circumſtances forbid the uſe, as tubercles, dropſy of the cheſt, ulcers in the lungs, &c. &c.

Some have been ſaid to die ſuddenly from ſuffocation in this diſeaſe; but this has generally been found to be from polypus in the lungs---partial palſy, or ſome ſpecies of dropſy, has been its termination.

Iſſues in both ſpecies are recommended in the inſide of the thighs juſt above the knee.

Light diet, eaſily digeſtible, and not flatulent, is the moſt proper; and riding on horſeback ought not to be diſpenſed with, becauſe it is always extremely beneficial.

With reſpect to ſituation, the patients ought to be left to themſelves, and fix in that in which they are moſt lively and comfortable, and wherein they can breathe with the greateſt freedom; for I have known the air of London more ſalutary to ſome than the pureſt in the country.

Thoſe of ſanguine habits, with ſtraight cheſts, who have been ſubject to frequent coughs, are moſt liable, in the latter part of life, to fall into aſthmatic complaints, particularly if they are groſs and fat---and it rages more in ſummer and autumn, than in the winter.

We

We ſhall find, by the enumeration of the remote cauſes, this complaint may be the conſequence of others, and is itſelf, therefore, purely ſymptomatic—to the original diſorder we are to advert, at the ſame time that we uſe modes proper for the alleviation of this diſtreſſing ſymptom.

§ 4. Suffocating Catarrh—Catarrhus Suffocativus.

We muſt be careful not to confound this with the TRACHÆAL QUINSY, or CROUP, (p. 501. 506, 507.) becauſe ſome authors have given the ſame name to this: notwithſtanding, we ſhall find them widely different, and that they require different modes of cure —*that* being an inflammatory affection of the branches of the windpipe, requires bleeding, which might be highly ſerviceable—*this* being ſpaſmodic, bleeding would be as injurious.

DESCRIPTION. In this complaint there is a peculiar kind of ſhrill croaking, accompanied with a quick and difficult breathing, attacking violently and ſuddenly, and generally in the night—from the ſingular noiſe, we may eaſily diſtinguiſh it from inflammatory affections of the lungs, which never attends them, and always makes its approach more gradually.

CHARACTERISTIC SIGNS. A ſuffocation ariſing from a ſpaſmodic conſtriction of the lungs, or rather windpipe, or a ſpaſm of the diaphragm, without hyſteric affections.

CURE.

CURE. We muſt here endeavour to take off the ſpaſmodic affections as ſoon as poſſible, by bliſtering the back, and the copious uſe of aſa fœtida, giving glyſters of a ſolution of this gum, and pouring the ſame down the throat; and if the fit abates, or is conquered by theſe means, bark muſt be given freely, to prevent a return.

To a child eighteen months old, ſome have given an ounce of aſa fœtida in ſolution, and injected as much by glyſters, in the ſpace of forty-eight hours.—In ſo ſhort a time it will probably be very difficult to get a child ſo young to ſwallow ſo large a quantity.

However, in ſmaller doſes it has been equally efficacious—alternate doſes of muſk and aſa fœtida will anſwer the purpoſe, in conjunction with the glyſter.

This diſeaſe is often met with in children, and is in ſome ſeaſons epidemical—but it very frequently proves ſo ſuddenly mortal, that medical aſſiſtance is of ſmall conſequence.

§ 5. SPURIOUS PERIPNEUMONY—PERIPNEUMONIA NOTHA.

from the Greek word *nothos*, ſpurius.

There have been different opinions concerning the ſeat of this complaint, though all agree reſpecting the affection of the lungs, yet differ with reſpect to the part—ſome aſſert that it is the ſmall branches of the pulmonary arteries, and thoſe of the windpipe—others, that it is in the cellular ſubſtance of that organ, that is, the membrane which connects together all the parts

of which the lungs are formed, and is the ſame connecting medium which unites the ſmalleſt fibres of the body with each other. See Lungs and Cellular Membrane.

I confeſs myſelf of the latter opinion; for, though expectoration has been carried on freely in this complaint, the patients notwithſtanding have died, which is not the caſe in humoral aſthma, or the inflammatory peripneumony, where the air veſſels, or the ſmall branches of the pulmonary artery, have been affected; for, under theſe circumſtances, the lungs have an opportunity of freeing themſelves from the oppreſſive load, by the free communication thoſe parts have with the windpipe—whilſt, on the other hand, in order to form a cure, the offending matter muſt be thinned ſufficiently to be re-abſorbed by the lymphatics, and carried back into the courſe of circulation. We have thought it neceſſary to premiſe thus much, in order to furniſh a perfect idea of the complaint, which, we think, will farther be corroborated by the ſymptoms and conſequences.

DESCRIPTION. In this complaint, though there are chilline ſs and heat alternating with each other, yet neither is the heat, pain, or thirſt, in any great degree—the pulſe is frequent, weak, and ſmall--it is often attended with, or there is a ſtrong propenſity to, vomiting--giddineſs or pain affects the head—the patients cough, and experience a ſenſe of weight in the breaſt, with a difficulty of breathing, and tightneſs within the cheſt—and, for the moſt part, the urine is of a pale colour—in ſome caſes they expectorate tolerably freely; but even

then

then the difficulty of breathing abates not, but they ſtill wheeze and feel themſelves oppreſſed; and, when that is the caſe, we muſt be very careful not to prognoſticate too favourably; for the fatal cauſe ſtill exiſts, and moſt commonly terminates in death.

CAUSES. An accumulation of ſerum in the cellular ſubſtance of the lungs—hence ariſes great oppreſſion on the air veſſels, and ſome ſlight obſtruction on the pulmonary and bronchial arteries, thereby hindering a full and free circulation of the blood through the ſubſtance of the lungs—to which old people—thoſe who are phlegmatic—weak—relaxed—and fat, are moſt ſubject—and theſe it attacks moſt frequently in moiſt, foggy, and rainy ſeaſons.

CURE. The indications are, to diſlodge the contaminated ſerum, and throw it out of the conſtitution, by making it ſufficiently thin, ſo that it may be abſorbed from the cells where it is lodged—and this we muſt attempt by emetics and ſtimulants; for on theſe we can alone depend for ſaving the life of the patient.

The antimonial emetics are the moſt proper, (No. 11, 12.) given in ſuch a manner that the ſhock and agitation may be moſt powerful—hence adminiſtered on the ſtomach being empty, or nearly ſo—the arms, back, ſides, and legs ſhould be fomented, and bliſters applied to them—muſtard whey, (No. 127.) decoction of ſeneka root, (277.) have been thought uſeful—when the cough has been violent, gentle opiates, joined with aloetics, have been admitted—volatile ſaline mixture, (No. 126.) coupled with nauſeating doſes of antimonials, in order to promote expectora-

tion, have been adviſed, and may, perhaps, be uſeful to remove obſtructions formed in the ſmall branches of the blood-veſſels of the lungs, occaſioned by the external preſſure of ſerum collected in the cellular ſubſtance; but they touch not the grand cauſe; for though theſe, or the application of ſome of the attenuating medicines, ſuch as camphor, vinegar of ſquills, gum ammoniac, may cauſe expectoration; in ſpite of all our endeavours, we very often, indeed, moſt commonly, ſee death uſhered in, by a perpetual laborious wheezing—great reſtleſſneſs and anxiety—intolerable oppreſſion at the pit of the ſtomach—a conſtant drowſy diſpoſition—coldneſs of the hands and feet—and a livid colour of them as well as the face, owing to the blood there ſtagnating.

In phlegmatic and relaxed habits, iſſues on the inſide of the thigh above the knee may act as a preventive, by hindering a ſerous accumulation taking place in the cellular ſubſtance of the lungs, by affording a continual drain to the conſtitution; but in the fit of the diſeaſe, though adviſed by ſome, can afford no relief, from the ſlowneſs of their action.—The body ſhould always be kept open by glyſters, whatever mode we purſue; and we may venture to aſſert, that if emetics, bliſters, and the uſe of volatiles, will not afford relief, medicine cannot be of much ſervice.

We muſt be very careful in diſtinguiſhing this from the true peripneumony, which may be readily done by remembering, notwithſtanding there may be ſome ſimilar appearances, that *in the ſpurious peripneumony there is no acute fever*—and alſo from the dry ASTHMA, becauſe

becauſe that is never attended with any fever; in this a ſlight fever manifeſtly ſhews itſelf, though far more obſcure than in the inflammatory peripneumony.

We ſhould have obſerved, that in all diſeaſes where a cough appears to be a prevailing ſymptom, mucilaginous and oily compoſitions are freely exhibited—here though they muſt be avoided, as muſt alſo opiates, except under circumſtances which we have before ſpecified.

SECTION XIX.

WE now come to ſpeak of thoſe diſeaſes wherein the humours of the machine are particularly concerned, owing to ſome error in point of quantity, or quality, or both, wherein they deviate from their natural ſtate, and from thence produce a variety of diſeaſes—the firſt of which we ſhall ſpecify is

§ 1. JAUNDICE;

from the French word jaune, yellow—it is alſo called ICTERUS, from the Greek *ikteros,* aurugo vel aurigo, which name it bears, from the appearance of yellowneſs like gold—MORBUS REGIUS—MORBUS ARCQUATUS—SUFFUSIO BILIS, from bile being ſuffuſed over the habit—this, therefore, is conſidered as a diſeaſe produced by the bile either obſtructing the common duct of the gall bladder, called ductus communis choledochus,

(32.) by its viſcidity, or concreting into a hard ſubſtance, named gall-ſtones—though it may be produced by other diſeaſes, as we ſhall ſee in the enumeration of its remote cauſes.

But we here mean only to ſpeak of it as originating from the cauſes above ſpecified, the reſt being properly conſidered only as ſymptomatic, and muſt have applications accordingly.

DESCRIPTION. At the commencement the patients generally appear languid and indolent, with an uneaſy ſenſation of tightneſs and oppreſſive weight at the pit of the ſtomach—after this there comes on a ſlight yellowneſs at the angles of the eyes, which diſperſes itſelf over the white, the ſkin at the ſame time putting on a ſimilar appearance—there is very often a pain of the ſtomach—the body becomes coſtive—the appetite fails—the excrements appear of a clay or aſh colour—and the urine yellow, tinging any white linen immerſed in it of the ſame colour, and depoſiting a copious yellow coloured ſediment—there is generally a weight, fullneſs, and ſtretching of the right ſide under the ſpurious ribs—there is alſo a general nauſea and loathing of food, ſometimes attended with vomiting—the ſkin often itches—the pulſe is ſometimes quick—ſometimes there is a hiccough—and, ſhould a looſeneſs come on, with yellow coloured fæces, the diſeaſe terminates.—Theſe are the common ſymptoms, and this the common courſe of the curable jaundice, which will go off in a few days, if it has originated only from a conſtriction of the duodenum, or the common gall duct—nor will it continue much longer if viſcid bile has only

been

been the obſtructing cauſe—but if biliary concretions have been the ſource, in a few weeks, or months, moſt probably the ſame ſymptoms will make their appearance in the ſame ſucceſſion; and, at length, the diſeaſe will, from a repetition, become perpetual—ſometimes better and worſe, though leſs ſevere than at firſt.

Under theſe circumſtances, the yellow colour becomes deeper in a great degree, forming what is called the black jaundice—ſo much does the bile diffuſe itſelf through every part of the habit, *that it has been aſſerted*, objects appear to ſuch patients of a yellow colour; and even the ſaliva acquires a bitter taſte—however, in theſe caſes, the blood ſeems to be ſo ſurcharged with bile, that its texture is broken down—frequent hæmorrhages appear, particularly of the noſe; and the blood tranſuding alſo through the ſides of the veſſels is depoſited in the cellular connecting membrane, occaſioning a general livid caſt—the fluids then running into a thin acrimonious ſtate, occaſions great itching---the body becomes dropſical---the belly fills with water; and thus is the miſerable ſcene cloſed.

CAUSES. The *remote* or *inducing* are, bilious or hyſteric colic---ſtrongly operating purges---offification, or compreſſion of the biliary ducts, from tumors externally or internally ſituated---pregnancy---violent anger, or long continued grief---obſtruction, ſcirrhus, or abſceſs of the liver---that black coloured viſcid fluid in the inteſtines of new born or young infants, called meconium, being not properly purged off---intermittent fevers taken off too ſoon by the uſe of the bark---

gall-

gall-ſtones or calculi, or viſcid bile, obſtructing the gall duct.

The *proximate* or *immediate*, an abſorption of bile, which has been ſeparated, into the habit---ſome are of opinion, that bile muſt be ſecreted and thrown back into the fluids before a jaundice can take place---whilſt others hold, that an increaſed quantity of bile not ſecreted into the gall bladder, by its viſcidity or acrimony may alſo be the cauſe---however, it is not our buſineſs here to attempt to ſettle theſe doubts---our opinion will be known by the following

CHARACTERISTIC SIGNS. A partial or total obſtruction of the ductus communis choledochus, (32.) moſt commonly from viſcid or concreted bile, attended with a yellow colour of the white of the eyes and ſkin---high coloured urine, tinging linen dipt into it of a yellow colour.

CURE. The indications of cure are, to remove the obſtructions; which, as it originates from different cauſes, will require different modes of treatment.

If it ſhould ariſe from viſcid bile, which we take to be the moſt common cauſe, in full habits, bleeding may firſt be had recourſe to, and afterwards dandelion draughts may be given, (No. 149.) every night and morning, for two or three ſucceſſive days; then the ſaponaceous pills, (No. 150.) four, two or three times a day, with four ſpoonfuls of the ſaline mixture, (No. 1.) or infuſion of quaſſia, (271.) or dandelion tea, ---after theſe have been continued for ſix or ſeven days, if no ſigns of amendment appear, if the yellow colour

of the ſkin and eyes begins not to grow thinner, the urine to be of a lighter tinge, and there ſhould be no yellowneſs in the ſtools, an emetic, (No. 11, 12.) then will be proper, which may be often repeated, if neceſſary; and the day after the calomel bolus and purging draught, (No. 105, 106.)---ſome indeed adviſe ſmall doſes of calomel, (No. 109.) to be mixed with the ſaponaceous pills, and purged off occaſionally---in addition to what is here adviſed, fomentations, (No. 85.) may be applied frequently to the right ſide, or bags of hot ſalt, oats, or a bladder half filled with boiled bran and water, pretty warm; and, by proceeding in this way, there is little doubt but the viſcid bile will be removed, and the cauſe of the diſeaſe conquered.

But ſhould there be any acute pain attendant in the region of the liver, with a quickneſs of the pulſe, and other ſymptoms indicative of any inflammatory affections, we muſt proceed as directed in inflammation of that organ, (539, 540.) before we have recourſe to any emetic, which may ſafely be adminiſtered after the inflammatory or painful ſymptoms are ſubdued.

Towards the concluſion of the diſeaſe, and to prevent a relapſe, the aromatic bitter bolus, (No. 64.) or the deobſtruent ſoap pills, (No. 117.) may be continued for ſome time twice a day, waſhed down with chamomile tea, or infuſion of quaſſia, (271.)

Bath and *Harrowgate* waters have been by ſome conſidered as ſpecific---they may certainly be very uſeful in jaundice proceeding from viſcid bile, or bilious infarction of the liver, towards the concluſion of the complaint,

complaint, and calculated perfectly to clear the liver from theſe cauſes; but in other caſes would, from their heating and ſtimulating powers, be highly improper.

When it proceeds from gall-ſtones, or ſcirrhoſity of the liver, we muſt act as in caſes of pain in that organ from theſe cauſes. (576, &c.)

When from a redundancy of bile, and bilious colic, what has been recommended in thoſe complaints, (566, &c. will be proper.)

In order, however, to prevent a return, and invigorate that part of the ſyſtem particularly affected, the diet of our patients ſhould be light and eaſy of digeſtion, avoiding all fatty or viſcid ſubſtances, or things too powerfully aſtringent—the body ſhould be kept regularly open, by the occaſional exhibition of the aperient pills, (No. 108, 109.)—riding exerciſe ſhould be perſevered in—and the place of reſidence ſhould be ſuch as afforded a pure, light, clear air.

Hoffman, in curing this diſeaſe ariſing from obſtruction, uſed to begin with bleeding; afterwards preſcribed half an ounce of antimonial wine in one or two ounces of oil of almonds, and ordered the patient to drink freely of the decoction of the roots of ſtrawberries, marſh-mallows, liquorice, or a handful of endive, ſuccory, chickweed, chervil, beet, and ſour ſorrel—to each of which decoctions he added two drams of cream of tartar and fifteen grains of nitre—in the evening an opening glyſter was given—and afterwards, a purge of Epſom ſalt and ſyrup of roſes, of each an ounce, diſſolved in two or three ounces of water, or made with ſenna

and tamarinds—if theſe formed not a cure, to the acidulated chalybeate ſprings he had recourſe.

Thirty grains of the aloetic pill, with myrrh occaſionally, is a beneficial medicine.

§ 2. Dropsy—Hydrops;

from the Greek word *udor*, aqua, water; becauſe this ariſes from a collection of lymph, or ſerous fluid within the cellular membrane, or different cavities of the body.

When it is general, it is called ANASARCA, from *ana*, per, through, and *ſarx*, caro, fleſh—when local, it receives its name from the part it affects, or the appearance it occaſions.

If in the breaſt, it is called HYDROTHORAX, from *udor*, and *thorax*, pectus, the cheſt—if in the belly, ASCITES, from *aſkos*, uter, a leathern bottle, from its appearance—if in the womb, HYDROMETRON, from *udor*, and *metron*, matrix, the womb—if in the head, HYDROCEPHALUS, from *udor*, and *kephalos*, caput, the head—and other ſpecies, as DROPSY OF THE LUNGS—OVARIA—FALLOPIAN TUBES—but as they all originate from one and the ſame proximate cauſe, when curable, they require ſimilar internal modes for the accompliſhment.—We ſhall therefore deſcribe the ſymptoms by which they may be diſcovered, before we proceed to the method to be adopted for their cure, making ſome obſervations where the general rules may be deviated from, with reſpect to the ſituation of the watery collection—and, FIRST, of

GENERAL

GENERAL DROPSY, or ANASARCA—this is alſo called LEUCOPHLEGMATIA, from *leukos*, albus, and *phlegmatia*, pituita, from the colourleſs ſwelling of the ſkin, ariſing from the collection of a watery or pituitous humour beneath.

DESCRIPTION. In this diſeaſe the body has a pale appearance—the whole ſkin grows ſoft, with an inelaſtic ſwelling—this originates from watery lymph copiouſly diffuſed through, and accumulated in the cellular membrane, (15.) encircling the whole body, its muſcles and coats—whence ariſes a ſoft tumor, pale and ſqualid, over the whole of the machine, retaining the indentation, or print of the finger, wherever ſtrongly impreſſed—the feet and legs ſwell, particularly towards the evening, and the tumefaction gradually aſcends upwards through the whole cellular membrane—hence it differs from that kind of paſty ſwelling which only affects the lower extremities in the evening and ſubſide in the morning; for in the anaſarca, in the morning, ſome parts are more ſwelled, particularly the eyelids and cheeks, alſo the ſcrotum, (63.) and penis, (64.) —a difficulty of breathing comes on, and cough—the patients loſe their appetite, but are very deſirous of liquids—the urine at firſt is pale and watery, though in the latter ſtages higher coloured, though almoſt always ſmall in quantity—the pulſe is ſmall, quick, and irregular—there is a ſlight fever—ſleep affords little refreſhment—and they ſeldom or never ſweat.

ASCITES is a conſiderable ſwelling of the belly, with a perceptible fluctuation within; for if the hand be laid on one ſide, and the other ſtruck, this fluctuation is

readily diſcovered. In the common ſpecies of this complaint, before the belly appears to ſwell, the patients make water in very ſmall quantity, which is foul, and depoſits a yellowiſh ſediment, or one coloured like brick-duſt—the legs generally ſwell, then the belly—after which a difficulty of breathing comes on, eſpecially upon lying down—the patients complain of weight or heavineſs—the fleſh waſtes away—and the bowels are commonly coſtive—general debility takes place—the pulſe becomes weak and frequent—there is a ſlow fever attends—by continuance the water becomes putrid, and brings on inflammation, ulceration, and mortification of the viſcera; for, on opening bodies who die of this complaint, ſome of them are found diſeaſed, moſt frequently the liver, next to that the ſpleen, ſweatbread, and meſenteric glands.

Though we ſhould obſerve, that in ſome caſes of aſcites, the fluctuation is not always perceptible, owing either to the great viſcidity of the contained fluid, or to its being confined in a number of cyſts, or mixed with what are termed hydatids, or ſmall veſicles full of fluid.

Sometimes the aſcites is accompanied with an anaſarca, (275.)—in which caſe a cure is ſcarce to be expected—and, indeed, unleſs the aſcites is recent, and the abdominal viſcera in a tolerable ſound ſtate, our hopes cannot be more favourable; becauſe, when the viſcera are diſeaſed, or ſtrongly obſtructed, theſe form inſurmountable obſtacles to a pleaſing termination.

HYDROTHORAX. Some authors who have been much employed in opening of dead bodies, aſſert, that this

this diſeaſe is much more common than is imagined—it is attended with a difficulty of breathing, and ſometimes of the acute kind—a weight in the cheſt—pallid countenance—paſty ſwellings of the hands and feet—a fluctuation upon motion—a ſudden ſenſe of ſuffocation during ſleep, and ſtupor of either arm—the patients are affected with a dry cough—nor can they lie down upon the ſide affected, nor in a ſupine poſture, if both cavities of the cheſt are loaded. This complaint is of long continuance, and does not intermit. There is often very great difficulty in diſcovering this diſeaſe—however, if there is a conſtant difficulty of breathing, with a paleneſs of the face—paſty ſwellings of the feet—ſhould the urine be made in ſmall quantity—with difficulty in lying down—a ſudden and ſpontaneous ſtarting out of ſleep, with palpitation—and water fluctuating in the cheſt, the undulation of which can be heard on ſhaking the patient by the ſhoulders, or ſtriking upon the ribs—there can then little doubt remain of the nature of the affection.

Sometimes there will ariſe a dropſy of the membrane ſurrounding the heart, called a DROPSY OF THE PERICARDIUM, (21.) in which urine is made in ſmall quantity, and of a very red colour—there is a difficulty of breathing, but not ſo ſevere as in the former caſe—and the patients lie down with more eaſe on the right than left ſide—they generally complain of thirſt, and have a dry cough—and feel a ſenſe of weight, oppreſſion, ſtraitneſs, and pain about the region of the heart after fatigue or converſation; they frequently faint, and are affected with palpitations—the pulſe is weak,

eaſily quickens, and ſometimes intermits—they often perceive an undulating motion about the third, fourth, or fifth rib—have paſty ſwellings of the hands and feet, and die ſuddenly.

The HYDROMETRON—the water is either contained in the uterus, Fallopian tubes, or ovaria, (59, 60, 61.) —there are no modes of properly diſtinguiſhing the two latter; but a conjecture may be formed, if any tumor appears in the place where they are ſituated, and this ſhould be accompanied with other dropſical appearances. With reſpect to a dropſy of the womb, it diſcovers itſelf by a ſuppreſſion of the menſes—a ſwelling of the belly—flabbineſs of the breaſts—attended with unwillingneſs or inability to move, pain, ſhiverings, and febrile affections.

CAUSES. The *remote* or *inducing* are, ſuppreſſion of any accuſtomary evacuations, as menſes, lochia, or piles —too free an uſe of fermented liquids, ſpirits, wine, or malt liquor—crude and viſcid food—cold water drank too copiouſly whilſt the body is more than naturally heated—the exhibition of very powerful purgatives—immoderate bleedings—and ſalivations;—and, indeed, they are often the conſequences of other diſeaſes, as hæmorrhages—repelled gout—dyſenteries —conſumptions—jaundice—continued, remittent, or intermittent fevers—pregnancy—ſcirrhous tumors of the abdominal viſcera, but particularly of the liver—— or polypous, or ſtoney concretions about the heart—— or, in fine, whatever will occaſion too free a ſecretion of the ſerous fluids into the cellular membrane, or any cavity of the human machine, and prevent the proper

action

action of the abſorbent ſyſtem, either ſolely, or in a degree inadequate to take up the fluids ſeparated into the cavities by the exhalent arteries---which laſt may be conſidered as the *proximate* or *immediate* cauſe of all dropſies.

CURE. The indications are, to evacuate the water from the different places where it may be affected; and afterwards invigorate the ſyſtem, ſo that the abſorbent veſſels ſhall be enabled to perform their functions properly.—With regard to the firſt point, if the patients are not too far exhauſted, and have ſtrength to bear the operation, and the caſe is recent, briſk purging is neceſſary, with ſome of thoſe medicines which are known to evacuate in the greateſt proportion the ſerous fluids, particularly jalap, joined with nitre, (No. 151.) gamboge, with cream of tartar, (No. 152.) in robuſt habits—in conſtitutions more delicate, the ſaline mixture, (No. 1.) with two or three drams of tincture of jalap, is ſufficient to anſwer the purpoſe.

Or, ten grains of calomel may be given, at proper intervals, to prevent a ſalivation, aſſiſted with ſix or ſeven ounces of a ſtrong decoction of garlic—and this laſt given three or four times a day.

On the intermediate days of exhibiting purgatives, diuretics and ſlight tonics may be adminiſtered—a ſpoonful of muſtard-ſeed, with a decoction of broom, (272.) powder of ſquills, (272.)—wild vine in powder or decoction, (272.)—quaſſia wood, (271.) with gentle preparations of iron, (210.)—or half an ounce of kali infuſed in a quart of Rheniſh wine, two or three glaſſes

of

of which may be taken in the day, and in the evening a ſlight opiate, (No. 5.)—the diuretic ſalt, (272.) may be given in any convenient vehicle—or the powder or infuſion of fox-glove, (272.) joined with ſome of the abſorbent powders, twice a day, increaſing the doſe as much as the ſtomach will bear with eaſe; for this medicine, though in high eſtimation as a diuretic, is apt to create, if too raſhly adminiſtered, an extreme and uncommon ſickneſs—the oxymel of meadow ſaffron, (272.) one or two drams three or four times a day, or half an ounce once or twice a day.

Cream of tartar, from half an ounce to ſix drams, diſſolved in ten ounces or a pint of water, taken early in the morning, has been ſucceſsful in various caſes both of the anaſarca and aſcites.

But, ſhould neither cathartics nor diuretics prove ſucceſsful, the ſweating chair has been recommended, as by this means great part of the ſtagnant lymph may be evacuated through the pores of the ſkin.

Indeed, ſome adviſe for this purpoſe from one to two ſcruples of the compound powder of ipecacoanha, formerly cailed Dover's powder, to be taken at bed-time, and laying the patient in flannel, and this repeated every other night—the ſweating, if procured, ſhould be kept up for ſome time, and the patient ſupported with gentle cordials, (No. 28, 29.) or camphorated mixture, (229.)—when the ſweating abates, the patient ſhould gradually cool, and the ſurface of the body be rubbed with hot flannel.

In many caſes recourſe may be had to ſcarifications with the lancet, or thoſe uſed in cupping in the lower

part

part of the legs; but care ſhould be taken not to make the wounds either too long or too deep, for fear of bringing on a mortification; which muſt be prevented by ſpirituous fomentations and proper digeſtives—from this operation conſiderable quantities of water have been evacuated.

If there are no viſceral obſtructions, ſmall doſes of bark may be continued through the whole courſe of the diſeaſe with conſiderable advantage, as they will contribute to ſtrengthen the ſyſtem, conſequently promote the action of the lymphatics.

The juice of leeks, a table ſpoonful taken twice a day, has been known to perform a cure—and when there is any feveriſh diſpoſition, the neutral ſalts of the diuretic claſs are preferable to the kali prepared—the diuretic electuary and draught, (No. 153, 154.) and the deobſtruent pills, (No. 155.) have been, in dropſical caſes, in high eſtimation—the pills in cold phlegmatic habits have been ſaid to be efficacious; but where there has been a tendency to inflammation, ſuppuration, or mortification, they are prohibited.

Different have been the opinions relative to the abſtinence from, or free indulgence in, the uſe of liquids—inſtances of cures have been produced where both one and the other have been efficacious—one would naturally conclude that the former was the moſt rational plan, calculated to prevent too great an accumulation of aqueous fluid—but, in deſperate caſes, I ſhould not refuſe the indulgence, particularly where there was an extreme longing; for the mind being gratified, often produces aſtoniſhing good effects on the conſtitution; for

for which we are not always able to account. I knew a woman cured by drinking a large quantity of forge-water one evening, where every other remedy had been tried for a long time in vain; and many other inſtances are to be found in the works of medical writers. In caſes of abſtinence, the thirſt ſometimes will be ſo diſtreſſing, as almoſt to conquer the moſt determined reſolution—in order, therefore, to alleviate this unpleaſant ſymptom, the mouth may be kept moiſt, and the intenſeneſs of thirſt aſſuaged by a mixture of lemon juice and oil—hard biſcuit ſoaked in Rheniſh wine—nitre lozenges—tamarinds—or holding a leaden bullet in the mouth, which ſolicits a flow of ſaliva, and keeps off thirſt.

The remedies adviſed for the anaſarca may alſo be had recourſe to in the aſcites—in addition to which, the abdomen ſhould be rubbed freely, and for ſome time together, two or three times a day, with the camphorated liniment, (No. 132.) increaſing the quantity of camphor, if neceſſary—for this has very often proved an uſeful auxiliary. Indeed, ſome practitioners have attributed the cure to frictions with oil alone.

However, when all our methods fail for evacuating the water, we muſt have recourſe to tapping—which operation is often deferred too long, till the abſorbent veſſels, by ſoaking in the watery fluid, become ſo relaxed, that they never can recover their tone and action—and the viſcera, from the ſame cauſe, will be ſo ſpoiled, that the relief procured can never be permanent—hence, where the diſeaſe continues obſtinate, notwithſtanding the uſe of internal and other remedies, a fluctuation of water is perceptible, and the abdomen

ſufficiently

ſufficiently diſtended to prevent the danger of wounding the viſcera by the trochar uſed in the operation, we ſhould not heſitate in performing it, taking care to increaſe the preſſure on the abdomen, either by the hands, or a broad belt, during the evacuation of the watery fluid, in proportion as the abdominal cavity is emptied; otherwiſe the blood will ruſh in ſuch ſuperabundance into the weakened veſſels, that the heart, for want of a ſufficient quantity being carried to it to ſtimulate its ventricles, would loſe its action, and a fatal ſwooning be the conſequence—for the prevention of which, the operation ſhould be performed as adviſed by HEISTER, SHARP, or MONRO, in the Medical Tranſactions of Edinburgh.

On the undulating motion being very ſtrong, the watery fluid pure, and capable of being evacuated completely, are founded our hopes of ſucceſs; for where the fluctuation is not very perceptible, we ſhall have reaſon to ſuſpect the fluid is viſcid, contained in cyſts, or full of hydatids, or that it is purulent or bloody, which are caſes more deplorable.

Sometimes though, after the water is evacuated, it will again accumulate—tapping may be again repeated; for numbers have undergone the operation a variety of times, and had by theſe means their lives prolonged; though their health has been never thoroughly re-eſtabliſhed.

In the DROPSY OF THE CHEST, the ſame internal remedies may be made uſe of as in anaſarca; and, ſhould theſe be inefficacious, we ſhould try what ſucceſs might be attained by making a ſimilar aperture within

the thorax, as adviſed in the aſcites, under the hands of ſome ſkilful ſurgeon—and when we are ſo fortunate as to procure an evacuation in any of theſe caſes of the watery contents, we muſt endeavour to prevent its accumulation by ſuch things as will invigorate the ſyſtem, increaſe the digeſtive powers, and add ſtrength and force to the veſſels, ſuch as bark united with chalybeates and aromatics, (No. 39 to 41. 61 to 65.)—daily friction with a fleſh bruſh—and moderate exerciſe—and in an anaſarca, if we can be aſſured that no miſchief lurks in the viſcera, cold bathing may be conducive to anſwer thoſe purpoſes—rhubarb alſo infuſed in wine may be occaſionally given.

With regard to diet, plain meats are allowable, preferring thoſe which are roaſted to boiled—all crude, watery, flatulent vegetables ſhould be avoided, and thoſe of the ſtimulant diuretic claſs (271.) only be permitted—Rheniſh wine, with Seltzer water, is the beſt beverage—or geneva mixed with ſome chalybeate, or common, water, if the other cannot be obtained.

As the DROPSY OF THE HEAD has often been miſtaken for other diſeaſes, particularly worms, or cutting of the teeth, on this ſubject we think it neceſſary to be particular. This complaint is divided into two ſpecies, EXTERNAL and INTERNAL—the former is of little moment, if not united with the latter; for in that water is perceptibly collected under the integument of the ſcalp and is cured by diſcutient fomentations, (No. 85.)—bliſters—ſcarifications—and ſetons—having at the ſame time recourſe to cathartics and diuretics.

But

But the INTERNAL DROPSY OF THE HEAD is not ſo readily diſtinguiſhable, as it comes on with ſymptoms ſo ſimilar to thoſe attendant on worms, cutting the teeth, and other irritating cauſes—and, when water is accumulated, very rarely; indeed with me, it is a doubt, whether it ever has been cured.

DESCRIPTION. The ſymptoms of this complaint vary in different ſubjects—ſometimes they come on rapidly—ſometimes conſiderably more ſlowly—owing, perhaps, to the parts of the brain affected, or to the different degrees of diſtenſibility of the cranium; for if the water accumulates between the dura and pia mater, (16, 17.) the pia mater and brain, (17.) and the ſkull ſhould be ſoft, and capable of being much diſtended, the progreſs of the diſeaſe will be more gradual, than if the accumulation happens in the ventricles, which is, for the moſt part, the caſe, and the ſkull ſhould be firm, and not capable of giving way at all—in general, however, it purſues the following courſe:—at firſt, there is a pain at the nape of the neck, or ſhoulders, or ſometimes the lower limbs—the arms, though not often, are ſimilarly affected—or, ſhould theſe parts feel no uneaſineſs, the head and ſtomach become the ſeat—ſickneſs comes on, and a variety of other ſymptoms, ſimilar to thoſe which happen in worm caſes—yet, in a few days, others of a more alarming and dangerous nature ſhew themſelves, ſuch as violent, deep-ſeated pain in the head, extending from temple to temple, and acroſs the forehead—ſickneſs is now and then very conſiderable—ſometimes the patient doſes, frequently ſighs, and breathes irregu-

larly—the pulſe alſo becomes irregular and ſlow—at the beginning, and a little before death, there are ſome febrile affections, eſpecially towards evening—at length, every ſymptom which is a concomitant with irritation of the brain attends by turns—the pulſe quickens—the breathing becomes very laborious and difficult--the heat exceſſive—the patient is averſe to light—takes things greedily—and cannot bear to lie in any poſture except horizontal—the excrements paſs away involuntarily—the hands are commonly elevated about the head—the eyelids become paralytic—and the iris, or center of the eye, dilated, and immoveable—the patients are apt to ſquint, and ſcream out often upon raiſing up the head—and the cheeks now and then fluſh—the pulſe ſoon flutters—the ſtrength fails very quickly, if convulſions do not ſuddenly put an end to the diſeaſe, and fatally cloſe the ſcene.

CAUSES and MODES OF CURE. Beſides thoſe cauſes which have been enumerated in dropſy, many of which may give riſe to this, there has been reaſon to ſuppoſe others may alſo be greatly inſtrumental in producing this, ſuch as falls, blows, or ſevere bruiſes upon the head—exceſſive exerciſe in hot weather, with expoſure to the powerful heat of the ſun—violent vomiting the hooping-cough—ſtanding long and repeatedly upon the head, or hanging by the middle over rails with the head downwards, common tricks by which children divert themſelves—or, indeed, any other cauſe which, in full habits and active conſtitutions, diſpoſe the blood too much to the head—and theſe particularly where no dropſical tendency has previouſly made its appear-

ance;

ance;—for I am fully perſuaded, that in very many of theſe caſes, if not in all, congeſtion and ſlight inflammation are the præcurſors to the aqueous accumulation. In this concluſion I am not only authorized by the opinions of ſome late judicious writers on the ſubject, but by experience, particularly in three caſes, two of which were cured, and one proved fatal. IN THE FIRST, I was preſent, when a lively, active boy, about five years old, came in from play to his mother, complained much of his head, and that, though he was not ſleepy, he could not keep his eyes open—on lying him down, he begged to be turned from the light, he could not bear it; and ſoon after he began to be ſick, and vomited conſtantly, when any thing was given to him—on examining him, he appeared heated, and his pulſe quick, and frequent; but not much more ſo than one might naturally expect, from the exerciſe from which he had juſt retired—the pupils of his eyes were contracted, and when a candle was held to him, it was with difficulty that he could for a moment keep the eyelids open—that there was a load and oppreſſion on the brain, I could not doubt—a glyſter was given him immediately, his legs were put into warm water, and eight leeches applied to his temples; for his mother would by no means permit the uſe of the lancet, nor cupping—and that night, four grains of calomel, with the ſame quantity of jalap and cream of tartar, were given him; before ten in the morning he had five or ſix ſtools—his vomiting ceaſed ſoon after the application of the leeches—he could bear the light better, nor was the pupils of the eyes in any

thing like ſo contracted a ſtate—ſtill his head was not perfectly eaſy, nor was he free from that drowſy appearance—he was bled a ſecond time, and his purge repeated at night, which produced every wiſhed-for effect—after which he lived for ſome time very abſtemiouſly, and now and then had recourſe to purgatives—and by theſe means was perfectly re-inſtated in his health.

THE SECOND was nearly ſimilar, though the ſymptoms, not any of them, appeared with ſo great a degree of violence—the attack was equally ſudden, and the complaint yielded to the ſame mode of treatment. In this caſe I was ſent for when the child had been ill only a few hours; and I purſued the idea merely of unloading the head. I had no ſuſpicion of water in any part of the brain.

IN THE THIRD CASE, the child had been ill for ſome days, and, from the account given me by the mother, a very ſenſible and intelligent woman, confirmed by the ſurgeon, added to the ſymptoms at that time apparent, I did not heſitate to conclude, that there was an accumulation of water in the brain; for the patient laboured under a coma—the pupils of the eyes were dilated—a general ſtupor was prevalent, with obſtinate coſtiveneſs—the pulſe was irregular—the face ſometimes fluſhed, ſometimes was pale—the ſtools, when procured by glyſters and doſes of calomel, were fœtid, and full of a jelly-like gluey mucus—and very little urine paſſed, and that often involuntary—from the application of a bliſter to the head, and rubbing in from half a dram to a dram of mercurial ointment, with two

or

or three grains of calomel given every night, all the ſymptoms appeared to be much alleviated—indeed, ſo much, that the parents flattered themſelves with the hopes of a recovery—but they were unfortunately deceived; for, on the evening of the day when theſe favourable appearances preſented themſelves, convulſions ſuddenly came on, and the patient in a few hours expired. On opening the head, the brain appeared to be full and tight—the veſſels of the dura mater diſtended with blood; and, in cutting away the ſuperior part of the brain down to the ventricles, innumerable red ſpots appeared through the ſubſtance, which were ſmall branches of arteries diſtended with blood—and in the ventricles was a great quantity of water, ſuppoſed not to be leſs than eight ounces—the inner ſurfaces of thoſe cavities ſhewed evident ſigns of inflammation, particularly on the bed of the optic nerves, called by anatomiſts, thalamus nervorum opticorum.

From the ſimilarity of theſe caſes, and the reſult of the laſt, I conclude, that if the two former had been neglected, the conſequences would have been the ſame.

In the beginning, therefore, of complaints of this kind, bleeding and purgatives ſhould be depended upon; and I am perſuaded, if adviſed in proper time, many unfortunate objects may be ſnatched from the jaws of death. In the latter ſtages, I fear we can never promiſe ſucceſs—raiſing a ſalivation by the uſe of mercury, or throwing it into the habit in a ſufficient quantity, to ſolicit the re-abſorption of the ſerous fluids from the ventricles of the brain, or places where it may

be accumulated—bliſtering the head—vapour baths—and the uſe of the fox-glove, (272.) as one of our moſt certain diuretics, given in ſmall doſes, bid the faireſt for relief; if any under theſe deplorable circumſtances are to be had, though I am greatly doubtful with reſpect to a radical cure—however, as the moſt rational means, they ought to be purſued.

§ 3. TYMPANY—TYMPANITES.

called ſo from *tympanum*, a drum, either from ſimilarity of ſound or diſtenſion—this is a light and elaſtic ſwelling of the belly, making a ſounding noiſe on being ſtruck, which is the characteriſtic ſymptom of this diſeaſe—to which may be added, eructations—rolling of wind in the bowels—coſtiveneſs—and pain—relief being afforded by the emiſſion of wind upwards or downwards—and a waſting of the other parts.

It is divided into two ſpecies—one named INTESTINAL, when it ariſes from flatulencies in the inteſtinal canal—the other ABDOMINAL, when it ariſes from air pent up in the cavity of the abdomen, between the inteſtines and the membrane lining the muſcles of the belly, called peritoneum, (29.)

THE FIRST we muſt attempt to cure by the adminiſtration of ſuch ſtimulants as expel wind, and are antiſpaſmodic, ſuch as carraway ſeeds, anniſeeds, &c. (221.) aſafœtida, ſpirit of vitriolic æther, (228, 229, 230.) with opiates, (233.) keeping the body open every now and then, with gentle warming aloetic medicines, (No. 108.) and uſing frictions to the abdomen once or twice a day—by theſe means we may diſcharge the flatulencies

flatulencies—and we ſhould alſo attempt to ſtrengthen the coats of the inteſtines, that a relapſe may be prevented, by aromatic corroborants and ſtomachics, ſuch as zedoary, (222.) quaſſia wood, (271.) orange-peel, and ſome of the warmer bitters—ſwathing the body with a broad belt—and uſing riding exerciſe—glyſters alſo may be occaſionally given of infuſions of chamomile, wormwood, or gentian, in which may be diſſolved from half a dram to a dram of aſafœtida.

THE SECOND requires tapping, if curable at all—but as this often ariſes from the corruption of water or other fluids confined in the cavity, or from ulcerations or mortifications of the different viſcera, little can be expected from this operation.

§ 4. ATROPHY;

from the Greek *a, alpha,* non, not, and *trepho,* alo, to nouriſh.

This complaint is very often ſymptomatic, depending upon ſome other diſeaſe in the habit, which diſeaſe, if it comes within the reach of the medical art, by curing, the atrophy, an effect produced from that cauſe, will alſo be conquered;—but our hopes can be but ſmall when the waſting of the fleſh is unaccompanied with any hectic fever, and comes on without our being able to diſcover any manifeſt cauſe—which is the caſe in the true ATROPHY, or NERVOUS CONSUMPTION; for this is a perceptible waſting away of the whole body, without any remarkable degree of fever, cough, or difficulty of breathing, attended with loſs of appetite, and

too weak digeſtive powers—hence ariſe languor and daily increaſe of emaciation.

DESCRIPTION. In the beginning, the habit has a puffy or paſty appearance—the countenance is pale and ſqualid—the appetite loaths every kind of food, and is gratified only by liquids—the patients are conſtantly languid, and keep very much in bed—the urine is often ſmall in quantity, and high-coloured; ſometimes pale, and copious—there is neither fever nor difficulty of breathing, but what ariſes from great weakneſs—hence the blood, from want of its wholeſome ſupplies, becomes acrimonious in length of time—from whence come on heat—a hectic fever, which increaſes—and is at laſt attended with cough and a difficulty of breathing.

CAUSES. The *remote* or *inducing* are, debility in the digeſtive organs—a poor and unwholeſome diet—a delicacy, and incitability of the nervous ſyſtem—a defect or excoriation of the mucus which ſhould defend the inner ſurfaces of the heart and arteries—exceſs of paſſion, or ſevere mental affections—very free drinking of ſpirituous liquors—unhealthful air—too conſtant, and too luxurious purſuits—too copious evacuations—old age, &c.—and, in fine, whatever will produce *a want of ſufficient quantity of properly elaborated juices—or a deficiency in the power of applying them*, which are the *proximate* and *immediate* cauſes.

In children, this diſeaſe very frequently happens, which is owing to another cauſe, as well as ſome of thoſe above ſpecified, which is too ſoon taking them

from the breaſt, and feeding them on ſolid food—in this caſe the legs hang looſely down—they refuſe to ſtand upon their feet—their ſkin grows ſhrivelled—the whole body, particularly the noſe and nates, become flaccid—and, in many inſtances, their appetite is inſatiable.

CHARACTERISTIC SIGNS. A waſting away and loſs of ſtrength, without any hectic fever.

CURE. The indications are, to reſtore the tone of the ſolids, improve the ſtate of the digeſtive organs, and increaſe the appetite, by the uſe of ſtomachics, as quaſſia wood, chamomile, orange and lemon, with chalybeates, (No. 60. without the vinegar and muriatic acid, No. 61 to 65. 71. 137.)—every third or fourth morning the patient ſhould be purged with rhubarb, (266.)—medicated wine, or beer, ſhould be taken twice a day, (No. 156.) and the ſtimulating tonic electuary, (No. 157.) may be adminiſtered—balſam of copaiva, (253.) Canada balſam, (271.) the liquor of hartſhorn, or ammonia prepared, mixed with a little ſugar—malt liquor, eſpecially London porter, may be drank, as it has proved uſeful and nutritious to thoſe who have not been accuſtomed to it—the lighteſt kind of nouriſhment ſhould be had recourſe to, with aſs' milk, beef tea, &c. (201, 202.)

As this diſeaſe happens to almoſt all old men, it is commonly attributed to a want of fluids; and, though it may not be attended with, it follows a fever—here choice, nutritious food, full of juices, is requiſite, (165, 166.) alſo the uſe of generous wine, and conſtant

warmth in winter—and ſleeping with young healthful ſubjects has been conſidered as particularly beneficial.

§ 5. SCURVY—SCORBUTUS.

There are vaſt variety of eruptive complaints which go under this denomination; for when ſpots of different kinds, of whatever nature they may be, and however various their appearance, ſhew themſelves upon the ſkin, for numbers of which we have no ſpecific term, they are all called ſcorbutic.

However, we mean to confine ourſelves to the PUTRID, or SEA SCURVY—which diſeaſe is conſidered to ariſe from a ſpecific or peculiar humour, generated in the conſtitution, and, though ſometimes epidemic, is neither contagious nor infectious.

DESCRIPTION. This may properly be divided into three ſtages, marked out by the different degrees of violence of the ſymptoms.

IN THE FIRST, the patients complain of weakneſs, and are much fatigued on uſing any exerciſe—they have a difficulty in breathing—are very often ſick—and have a diſreliſh for, or diſlike to animal food—the gums are hot, painful, itch, and on them, as well as the tongue, there appear ulcerations—the teeth become looſe, decay, from the gums being in a great meaſure deſtroyed, and leaving the parts, which in the natural ſtate they cover, too much expoſed to the air—their breath becomes extremely offenſive—the urine is high-coloured, ſmells ſtrong and diſagreeable, and has floating on its ſurface an oily film, or ſkin-like appearance

pearance—the pulſe, for the moſt part, is weak, ſeldom hard, and always grows quicker upon motion—different coloured ſpots appear on various parts of the body, except the face, reddiſh, ſometimes of a bluiſh caſt, livid, or black—the gums become ſoft and ſpongy; and from them, as well as from other parts of the body, there are effuſions of blood.

IN THE SECOND, pains attack the legs, which alſo ſwell, as do the knees, which impede the motion of theſe parts—beſides, pains alſo affect the belly, breaſt, vertebræ, and all the muſcles of the machine—the face begins to look ghaſtly—and ſo great is the languor, when the patients have refrained a long time from motion, that, on being ſlightly moved, they are apt to faint; and ſometimes, if expoſed to the open air, they die; now they have often febrile affections of the erratic, continued, or intermittent kind—palpitations of the heart—and difficulty of ſwallowing—their underſtanding and appetite, notwithſtanding their great debility, keep up in a tolerable degree—and they have no pain, except on motion.

IN THE THIRD STAGE, the tendons and joints grow ſtiff—they have frequent fainting fits—great dejection of ſpirits—and are extremely fearful, from no apparent cauſe—the cicatrices of old ulcers, if there ſhould be any, again break open—and on the legs, ſoft, livid, and painful ſwelling takes place, and ſpongy ulcers, which bleed—obſtructions, ſcirrhoſities, ulcers, and mortification affect the viſcera—the urine is ſmall in quantity, fœtid, high-coloured—difficulty of breathing,

ing, ſuddenly deſtructive, ſometimes cloſes the ſcene, or they expire in ſome fainting fit.

CAUSES. The *remote* or *inducing* are, living in a moiſt, cold atmoſphere, particularly if in marſhy ſituations—ſuppreſſed or immoderate evacuations—mental affections of the gloomy kind—ſorrow and fear—preceding diſeaſes—an indolent life, with luxurious indulgences of the appetite—groſs viſcid food without any, or with too great a ſcarcity of, freſh vegetables—living upon the coarſe ſalted, ſmoaked, or dried fleſh of quadrupeds or fiſh—few of theſe cauſes ſingly are ſufficient to bring on this diſeaſe; there muſt be a combination—ſailors, from other ſources beſides theſe, are ſubject to the ſcurvy, becauſe they feed on muſty bread, water, fiſh, and fleſh, which are corrupted.

Now theſe cauſes, either by ſuppreſſing the matter of perſpiration, which ought to paſs out of the habit, or from their own corrupt nature, induce an alcaleſcent acrimony in the blood, which particular acrimony is the *immediate cauſe* of the ſcurvy.

But we muſt here obſerve, that it not only affects people who live in cold, damp ſituations—have little or no vegetable food, wine, or other cordial drink, and are not ſufficiently cloathed—but it ſometimes riſes in dry ſoils and pleaſant ſituations, and attacks people who live in affluence—and hence becomes epidemical, as was the caſe in the ſpring of the year 1760, in Hampſhire; for there it extended its influence in a moſt amazing manner amongſt all claſſes of people.

From

From the conſideration of theſe cauſes, it appears probable, and is generally allowed, that the ſcurvy ariſes in the body ſpontaneouſly, in conſequence of ſome unknown changes in the atmoſphere, which are more capable of generating ſcorbutic acrimony, in proportion as there is a defect of ſound vegetable diet, fermented liquors, and clean or ſufficient cloathing.

But though the combination ſeems neceſſary to produce this diſeaſe in the ſoundeſt and ſtrongeſt conſtitutions, ſtill, in ſuch habits as are weak, and naturally relaxed, dull, and ſlothful, or which have been debilitated by any preceding malady, notwithſtanding they live poſſeſſed of generous and proper diet, with warm cloathing, experience convinces us, that from changes of the atmoſphere alone, in them this complaint will make its appearance.

CHARACTERISTIC SIGNS. Loſs of ſtrength —bleeding of the gums—and different coloured ſpots in the ſkin, for the moſt part livid, particularly at the roots of the hair—occurring in cold climates, moſt frequently, after feeding on putrid or ſalted animal food, that of the vegetable claſs being at the ſame time defective, particularly freſh vegetables.

CURE. Dreadful as are the ſymptoms of this complaint, if the texture of the whole ſyſtem of the ſolids is not deſtroyed, they all give way to proper treatment. The indications of cure are, to attempt to promote the free excretion of the putrid humours by the inteſtines, kidneys, and ſkin, leſt, by a ſtagnation of this ſcorbutic virus, the corruption may become greater and more acrid.

For

For which purpoſe, living upon freſh vegetables, be they of what nature they will, is recommended, particularly thoſe of the cooling aceſcent or acid kind, ſuch as lettuce, cabbage, endive, lemons, citrons, oranges, gooſeberries, ſorrel—uſing cyder, perry, and white wine for drink—milk diet, the creams of rice, oats, barley, ſago, wheat-bread well baked, and the fleſh of young animals, or broths made from them—onions, garlic, leeks, water creſſes, horſe-radiſh, muſtard, &c.

With regard to medicines, gentle aperients are only allowable—ſtrong cathartics are hurtful—as are alſo all opiates; for they deſtroy the ſtrength, and diſſolve the blood—all metalline preparations ſhould be prohibited, particularly thoſe of quickſilver, iron, and antimony.

The moſt eligible aperients are tamarinds, prunes, cream of tartar, or ſuch as come neareſt to the vegetable claſs—in order *to aſſiſt perſpiration*, tar-water, ſpruce, decoction of the branches of the common red fir or pitch tree—*to promote urine*, oxymel of ſquills, taken in ſmall doſes, but often repeated in the day, ſo that within that ſpace of time one ounce may be conſumed; for by this the body is kept open, the pains are mitigated, and all the excretions promoted.

Every other day, in the beginning, a ſweat ſhould be raiſed, by taking two or three times in twelve hours twelve grains of the ſquill pill of the London or Edinburgh Diſpenſatories, or the camphorated bolus, (No. 158.)—theſe ſhould be continued for ſome time, though

though the diſeaſe ſhould be much alleviated, to prevent a relapſe.

Goat's whey would be very beneficial, with ſmall doſes of Polychreſt ſalt, mixed with two or three ounces of the ſcorbutic juices, taken two or three times a day; for theſe prove mildly aperient and diuretic.

If there ſhould be no fear of hæmorrhages, warm baths, made with aromatic plants are ſerviceable in promoting perſpiration, and diluting the humours.

Bleeding in general is extremely prejudicial in the ſecond and third ſtage of the ſcurvy—nor ſhould it be uſed even in the firſt.

The mouth may be waſhed with any of the gargles, (No. 44. 46. 93, 94.)—or decoction of bark, with tincture of myrrh, may be uſed—to the ulcers, ſtrong decoctions of bark, abſorbed by lint, or ſoft rags, is the moſt uſeful application—and, ſhould the limbs be ſwelled, or the joints ſtiffened, they may be bathed with warm vinegar, or partial vapour baths may be applied.

With reſpect to the uſe of vegetables, we muſt obſerve, that if patients have been deprived of them for a long time, they muſt not be ſuffered to eat of them at firſt voraciouſly, as they are apt to do if left to themſelves, leſt they ſhould fall into a fatal dyſentery —they ſhould begin moderately, and increaſe the quantity by degrees.

On regularly obſerving what has here been laid down, particularly the feeding on freſh vegetables, we ſhall have no reaſon to be doubtful of a cure, which uſually firſt ſhews itſelf by a gentle looſeneſs—and if in a few

days the ſkin becomes ſoft and moiſt, it indicates infallibly a quick recovery, eſpecially if the ſtrength returns, and the patient can bear being moved and carried into the freſh air without fainting—but ſhould the body remain in a coſtive ſtate, notwithſtanding the free uſe of vegetables, and the ſkin harſh and dry, we muſt have recourſe to the gentle aperient medicines we have before ſpecified, and warm bathing; for nothing contributes more to the recovery of ſcorbutic patients than gentle ſweating.

Different other remedies are recommended, ſuch as the decoction of water dock root, with cryſtals of tartar, (No. 159.)—communicating fixable air to the ſtomach, by means of neutralizing prepared kali in that organ, (No. 160.) WORT, (No. 161.) where freſh vegetables cannot be ſupplied, has been conſidered as more efficacious than the inſpiſſated juice of oranges and lemons, mineral acids, or ſour crout, or what is generally taken and applied at ſea for the cure of the ſcurvy, of which from two to three or four pints in a day are to be adminiſtered, if the patient can bear it, and the looſeneſs, which it generally occaſions, be not too violent.

However, though the general plan here laid down will ſeldom fail where there is a probability of ſucceſs, ſtill, in caſes of emergency, where freſh vegetables are not to be had, it may be of ſome eſſential ſervice to be informed of thoſe things which may in ſome degree ſupply their defects.

§ 5.

§ 6. SCROPHULA;

derived from ſcroſa, a ſwine, becauſe theſe animals are ſubject to it: when it fixes on different parts, it receives different names—if the glands of the jaw, or below the ears, it is called STRUMA—if under the tongue, RANULA—if in the lachrymal glands, LIPPITUDO—if in the thyroid gland, BRONCHOCELE, or Derbyſhire throat—if the glands of the arm-pits, breaſts, groins, lungs, meſentery, or other parts, then it is called, though ſaid to be improper, a ſcirrhus of thoſe parts. Notwithſtanding the chief ſeat of this diſeaſe is in the glands, (12.) it does not only occupy them, for it ſeizes the adipoſe membrane, muſcles, tendons, joints of the body, and the bones themſelves.

Scrophulous patients, it is obſerved, uſually poſſeſs a more lively diſpoſition, and a maturity of underſtanding ſuperior to others, in the more early periods of life; and that this fixed diſeaſe will continue, without almoſt any change, until the age of puberty, at which time it recedes, and the patients become more robuſt, and freer from other diſorders.

Authors are not agreed whether it is contagious or not—ſome ſay, that it may be tranſmitted from one to another, and that it is capable of being communicated by a nurſe—however, ſo long as a doubt remains on this head, prudence ſhould perſuade us to adviſe ſcrophulous patients to lie alone.

DESCRIPTION. Tumors, generally about the bigneſs of a pea, bean, or cheſnut, hard, indolent, moveable, of the ſame colour with the ſkin, unleſs they

they ſhould be in a ſtate of inflammation, for the moſt part, ſeize the fauces and neck—often preceded by irregular pains of the belly; but they are alſo fixed in the arm-pits and groins—though they increaſe gradually, and adhere to the neighbouring parts—after they have remained for ſome time in this ſtate, they at length begin to be painful, attended with heat and redneſs of the ſkin—the pain is of the lancinating kind, coming on now and then, from the ſcrophulous humour becoming acrimonious—now a lurking fever begins to make its appearance—and in the part affected there is a hard lumpy feel before an imperfect ſuppuration takes place, which in ſome weeks, or months, breaks, and from thence iſſues forth a thinniſh white and curdly matter, which diſtinguiſh them from other ſpecies of tumor, leaving a foul ulcer, with the lips ſwelled and hard—theſe are healed with difficulty, and then very ſlowly, leaving a diſagreeable cicatrix—ſometimes the ulcers are of ſo virulent a nature, that they occaſion a foulneſs of ſome of the contiguous bones—when theſe ſcrophulous tumors affect the lungs and other viſcera, a conſumption is the conſequence—and, indeed, perhaps, greateſt part of the conſumptive caſes may to this owe their origin—and ſuch children are very obnoxious to many incurable diſeaſes, dropſy of the belly, diarrhœa, hectic fevers, emaciation, diſſolving ſweats, &c.

The ſcrophulous humour of long continuance ſometimes fixes in the joints, and there creates tumors—whence ſtiff joints, ſwelling of the bones, and infinite other incurable maladies—ſo that ſtrumous ſwellings

of

of the neck may be conſidered as the ſmalleſt part of the diſeaſe.

The joints moſt commonly affected are thoſe of the fingers, wriſts, knee, elbow, and ankle; ſometimes that of the thigh—a ſtrain in any of which will often be the cauſe of the ſcrophulous taint ſettling there, and ſhewing itſelf more ſuddenly, than if no ſuch accident had happened; for then the ſwelling comes on more gradually, and without pain or diſcolouration.

But ſometimes this humour does not ſhew itſelf externally, but fixes itſelf in the internal parts of the habit—in theſe caſes, if there ſhould be *thickneſs of the upper lip*, which is generally held as a ſymptom peculiar to conſtitutions, where the ſcrophulous taint is prevalent, and without any other concomitant ſymptom, there will be ſufficient room to ſuſpect a ſcrophulous acrimony—in theſe caſes, the glands of the meſentery are generally found ſtuffed and enlarged with a cheeſy, purulent, earthy matter—hence come on emaciation, hectic fever, and death.

Sometimes the ſame matter will fix itſelf on the lymphatic glands of the lungs, and produce cough—difficulty of breathing—and conſumption:—and, when ſcrophulous tumors are unequal, they are apt to become cancerous.

CAUSES. Thoſe which are *remote* or *inducing*, are ſaid to be, living upon coarſe, viſcid, or acid diet—or too great quantity of ſweets—want of proper exerciſe—external injuries—preceding diſeaſes—venereal virus—a moiſt atmoſphere—expoſure to too ſevere cold—nurſe's milk being too aceſcent or viſcid—or

being herſelf in a diſeaſed ſtate—drinking ſnow water—diſlocation of any joint—or having the ſcrophulous taint inherent in the conſtitution.

The *proximate* or *immediate*, a viſcid depravity of the ſerous or lymphatic humours, obſtructing and ſtuffing up thoſe glands of the machine called *conglobate* or *conglomerate*—the FIRST of which is a little ſmooth body, wrapped up in a fine ſkin, by which it is ſeparated from all other parts, only admitting an artery and a vein to paſs in, and giving way to a vein and excretory duct to paſs out—the LAST conſiſts of a number wrapped up in one common membrane.

CHARACTERISTIC SIGNS. In general there are tumors of the conglobate, and often of the conglomerate, glands, particularly of the neck—the upper lip and ſides of the noſe being full and ſwelled—the face florid—the ſkin ſmooth—and the belly ſwelled.—When it does not make its appearance externally, ſee the ſymptoms. (753.)

CURE. This diſeaſe is extremely difficult to conquer, owing to the ſcrophulous humour being of ſuch a nature, as to be capable of lurking long in the habit, without manifeſting itſelf—hence, before people are aware of its exiſtence, it gets a firm footing in the conſtitution, which renders it ſo hurtful and unconquerable in its effects.

However, the indications of cure are, to clear the lymphatic ſyſtem, ſubdue the acrimony of the morbid fluid, and ſtrengthen the habit in general—for which purpoſes many medicines have been recommended.

Some

Some adviſe the application of the *hemlock plaiſter, with ammoniacum,* (No. 162.) *with lime water and burnt ſponge, or vegetable alkali,* internally—purging the patient now and then with *black hellebore* and *calomel.*

Others, *millipedes,* or *wood lice, aſs' milk, decoction of ſarſaparilla, with burnt ſponge,* or *kali prepared.*

The long continued uſe of the *decoction,* or *juice of colts-foot,* has been conſidered by ſome a certain remedy—*milk whey, with the dead nettle,* has acquired much praiſe.

But the chief remedies in which practitioners place any confidence are, *hemlock---bark---fixed foſſile alkali---ſea-air,* and *ſea-bathing*—and, perhaps, in the proper applications of theſe we ſhall find the greateſt probability of ſucceſs, applied according to the different circumſtances of the diſeaſe.

Before there are any ſymptoms of ſuppuration, or hectic fever, with waſting away of the fleſh, the ſea-water anſwers the beſt; of which from half a pint to a pint is to be drank every morning for ſome months; and the patients ſhould alſo bathe in the ſea—the water gently purges — promotes ſecretion — warms and ſtrengthens the habit—and, externally applied, diſcuſſes the tumors, and prevents the increaſe of the acrimony of the fluids—but in the inflammatory ſtate of the tumors it is better omitted, until the inflammation abates, or the matter is diſcharged.

At firſt the ſea-water generally occaſions thirſt; but that ſoon wears off, or ſleeping after it abates this un-

eaſy ſenſation.—It has alſo been of ſervice where a caries has affected the bones.

Some give it only in ſuch quantity as to keep the bowels moderately open; and, when it creates thirſt, mix it with common water.

When there are running ulcers, and a degree of hectic fever, the bark is then preferable; and the beſt mode of adminiſtering it is in tincture made with lime-water, (No. 163.) with which may be adminiſtered the powder or extract of hemlock. (233.)

When the diſeaſe becomes to be inveterate, and approaches to the ſcirrhous or cancerous ſtate, hemlock muſt be given freely, gradually increaſing the doſe to the utmoſt quantity the patient can bear; to which ſmall portions of calomel, or corroſive ſublimate, may be added, a quarter or half a grain of the former, or one-twentieth, or ſomewhat more, of the latter, to each doſe; for theſe not only promote ſuppuration, but meliorate the diſcharge from the ulcers:—but this mode of termination ſhould be avoided if poſſible, as the ulcers which ſucceed are ſlow in healing—when they, however, form abſceſſes, it is neceſſary to obſerve, that they ſhould never be opened till all the lumpy induration is diſſolved; perhaps in this ſtate it is even better to leave them to themſelves; for it is remarked, that they often anſwer better when they break ſpontaneouſly, than when opened by art; and the ſinuſes that are formed afterwards are ſeldom cured by dilating—hence it is unneceſſary, as well as inhuman, to torture the patients by repeated inciſions; for theſe

theſe ſores never heal up until the acrimony ſhall be either ſubdued, or the conſtitution acquires ſufficient firmneſs.

The common *ſea wrack* rubbed on, or applied in form of cataplaſm, ſometimes ſoftens, and diſperſes them—or *freſh ox-gall*, mixed with *ſoap liniment*, is conſidered to form an efficacious reſolvent mixture.

However, in the indolent ſtate of theſe tumors, all irritating or ſtimulant applications, though of the weaker claſs, are ſcarce ever to be uſed, becauſe they are apt to bring on ſuppuration.

Fixed foſſile alkali, called ſoda, (297.) with ſtrong decoction of *colts-foot*, I have known ſerviceable, continued for ſome months—and it is adviſeable to give mercury united with hemlock, (756.) and bark decoction, (300.) and adminiſter theſe alternately, changing them every three or four weeks, when we find the ſymptoms ceaſe to abate by the application of any of them—that medicine called the *terra ponderoſa muriata*, muriated barytes, given in ſmall doſes, of three or four drops, gradually increaſed, is a medicine preferable to the ſoda—though alone I have never experienced the very great efficacy which I have been told it poſſeſſes—though in ſome of the ſerous eruptive caſes I have perceived very evident advantages from its uſe—it ſeems chiefly to act as a diuretic and gentle aperient.

Large ſetons, or iſſues, may be ſet, as perpetual drains to the habit; they are ſerviceable.

In ſcrophulous caſes of long ſtanding, ſulphureous waters, as thoſe of Harrowgate, Moffat, and Llandridod, have been ſaid to be highly beneficial; but, in order to accompliſh a cure, there ſhould be a

ſteady perſeverance in general for ſome years;—ſtill it is frequently found that all theſe various methods fail, and nothing, except the removal into a warm climate, will ſo well eradicate the complaint—though we have inſtances of people being cured by living a ſeries of time upon the ſea coaſt.

With regard to all external applications, thoſe of the aſtringent and ſtimulant claſs are the beſt, ſuch as water of acetated litharge, (210.) diluted—ſea-water—water with every kind of ſaline or mineral impregnation—cold water alone hath often produced a good effect; for theſe promote circulation through the veſſels, and give firmneſs to the parts already in too great a ſtate of relaxation. Theſe, however, come more under the ſurgeon's hands; and therefore we refer the reader to the works of Mr. Wiſeman, Heiſter, and Bell, which may be conſulted on this ſubject with advantage. With reſpect to diet, it ſhould be of the light, dry, and eaſily digeſtible kind—all viſcid food ſhould be carefully avoided—ſleep ſhould be taken moderately—and alſo gentle and conſtant exerciſe, particularly in a dry, warm air; for moiſt ſituations, and thoſe which are cold, are extremely pernicious—and alſo frictions will be beneficial—in fine, every thing that will keep up a free and regular ſtate of perſpiration, and aſſiſt in invigorating the ſyſtem, ſhould be ſolicitouſly obſerved.

§ 6. Cancer.

This we may ſometimes trace from the foregoing diſeaſe; for it has been obſerved, that ſome of thoſe who,

who, in the early periods of their lives, have ſhewn appearances of ſcrophula, have in the more advanced ſtages been affected with cancers—hence it is not improbable but that there may be ſome affinity between the humors producing theſe two diſeaſes. It has been called CARCINOMA, from the Greek word *karkinos*, cancer, a crab, from its appearance, the turgid veins running round the margin of the tumors being ſomething ſimilar to crabs claws—and when a hard ſcirrhous tumor begins to be unequal—puts on a livid colour—has acute darting pains ſhooting through it—and at the ſame time veins ſurrounding it being diſtended, and having a ſerpentine appearance, called varicoſe—theſe are ſymptoms conſidered as declaratory of a cancer—but, indeed, ſometimes it will ariſe in the lips, gums, tongue, and ſome other parts of the body, without the appearance of ſcirrhus preceding it.

When this tumor lurks under the ſkin, it is called OCCULT—but when it becomes ulcerated, it then is called OPEN, and is diſtinguiſhed by a very offenſive and fœtid diſcharge—the lips of the ulcer inverted—an hardneſs of the ſkin—an exudation of a thin, acrimonious fluid—pricking, darting pain, very acute, and obſtinate reſiſtance to every application.

Like ſcrophulous tumors, cancerous ones are lumpy, unequal; but exceed theſe and every other ſpecies of tumor in hardneſs, though, whilſt they remain in an indolent ſtate, and without any diſcolouration in the ſkin, they are termed SCIRRHI—when an itching is perceptible, ſucceeded by the darting pain we have before deſcribed, the ſkin turns darkiſh or livid, and the veins un-

der the ſkin put on a varicoſe appearance (759.) in the part affected, they then are conſidered as CANCERS.

DESCRIPTION. A cancer in the beginning is generally ſmall, and increaſes gradually; and notwithſtanding the changes of the colour of the ſkin already mentioned, and that of becoming painful from being indolent, it is ſometimes very difficult to determine, when the tranſition from one ſtate to the other takes place, becauſe, according to concurring cauſes, the progreſs becomes quick or ſlow.

It has, with great judgement, been remarked, that *when peculiar kinds of burning ſhooting pains, an alteration of the colour of the ſkin to that of browniſh, purple, or livid,* appear, then the diſeaſe may be conſidered as a malignant ſcirrhus, or confirmed cancer—and alſo when it is arrived to this ſtate in women's breaſts, the magnitude of the tumor greatly increaſes, and very quickly, having a knotty, unequal ſurface, a greater number of glands being obſtructed, the nipple ſinks in—full and turgid veins are conſpicuous, diffuſing themſelves ſome diſtance round the tumor, and reſembling the claws of crabs.

Theſe are deemed characteriſtic ſigns of an occult cancer externally ſituated; but when theſe pains and heat ſucceed in parts where the patient has before been ſenſible of a weight and preſſure, accompanied with a dull pain, we have great reaſon to believe it lurks internally.

A cancer may remain in an indolent ſtate for years, without any ulceration, yet the humour may acquire ſuch a degree of acrimony as to erode the integuments, then

then commences the open cancer, from which will iſſue a thin fluid of ſo cauſtic a nature, that the neighbouring parts will be ſpeedily corroded, whether hard or ſoft, and thus forms an ulcer ſo obſtinate, that it is incapable of being healed by any applications yet diſcovered, nor can the acrimony be corrected or ſubdued by any known alterative—the fleſh within the ulcer becomes ſpongy—the lips of the wound ſwelled, livid, and inverted—the pain intolerable—the glands of the neighbouring parts become obſtructed—ſometimes hæmorrhages enſue—the appetite is loſt—a ſlow fever, with waſting of the fleſh, comes on—the ſtrength fails—the patients are afflicted with convulſions and ſwooning—and death, more deſirable than life, cloſes the miſerable ſcene.

CAUSES. The *remote* or *inducing* are ſaid to be, ſuppreſſed evacuations—great dejection of ſpirits—frights and anger—a mode of living, medicines, or other diſeaſes generating a corroſive acrimony in the blood—an increaſed motion in the blood, from whatever cauſe it may ariſe—cold—external irritation from friction, compreſſion, eryſipelas, or medical ſubſtances—barrenneſs, and a life of celibacy; for women who have lived in that ſtate, as well as arriving at the period of menſtrual ceſſation, are moſt liable to this complaint—next to thoſe, mothers who have not ſuckled—afterwards, thoſe who are paſt child-bearing—and thoſe who are leaſt ſubject to the diſorder, are men, and women who have raiſed their own children by the breaſt.

The

The *proximate* or *immediate* is ſuppoſed to be, a ſpecific corruption or putrefaction, though ſlow in its progreſs, of the humours obſtructing the glands.

CURE. A true cancer, I believe, is ſeldom or ever cured, except by amputating the part affected—if, therefore, the complaint is in its recent ſtate, ſmall, ſolitary, and moveable—*eſpecially if it comes from an external injury*—if it is in a free ſituation, neither adhering to any large veſſels, nerves, ligaments, nor to the bones—the conſtitution being good, and in young ſubjects, the part affected may be taken off by the knife; and this mode is preferable to the application of any cauſtic ſubſtances—but, in all theſe caſes, where operations are to be performed, or external applications made uſe of, the beſt advice we can give is, for the patients to depend on the judgement of ſome cautious and experienced ſurgeon.

With regard to medical aſſiſtance in thoſe ſcirrhous tumors, before they have put on the poſitive appearance of cancer, experience authoriſes us to recommend bleeding, to take off the general fullneſs of the habit—afterwards the application of leeches to the part affected, and that repeated, as occaſion may require—and now and then exhibiting a cooling purgative—indeed, where we are led to believe there may be a cancerous tendency, from ſome degree and continuance of pain, topical bleeding is neceſſary, and the application of poultices made of hemlock leaves, with the internal exhibition of the ſame medicine, (233.) in extract or powder, has apparently ſtopped the progreſs of the complaint.

complaint. Indeed, in three caſes of ſcirrhoſity of the uterus, by the proper management of hemlock, corroſive ſublimate, opium, and ſome arſenical preparations, I have known great benefit to be derived---one of which, the moſt violent, occurred at Knightſbridge lately, where I attended with Mr. Williams, an attentive and judicious practitioner; the patient was a perſon of delicate habit, ſubject to hyſteric affections, from ſtrong nervous incitability, and whoſe muſcular ſyſtem was alſo more than commonly irritable—ſhe complained of excruciating pain in the lower part of the belly---her pulſe was quick---ſkin dry---totally reſtleſs---and very thirſty---ſhe now and then complained of chillneſs, which was always ſucceeded by a heat of the ſkin, and a quickneſs of the pulſe, that always increaſed towards evening, and went off by copious perſpiration---the womb was apparently much enlarged, very hard, and preſſed low down into the pelvis---ſhe complained of pains darting through the lower part of the belly---and, from the weight and pain was altogether incapable of walking, nor could be moved from her bed without great agony---whatever ſhe took for ſome time ſhe vomited up, ſo that ſhe received, for the ſpace of three weeks, little or no nouriſhment---ſhe was alſo often and ſtrongly affected with that unpleaſant ſenſe of ſuffocation, or choaking, from the contraction of the throat, called globus hyſtericus ---ſhe had alſo through the vagina a very offenſive and acrimonious diſcharge, which, from excoriating the parts, occaſioned her much additional uneaſineſs---however, by the uſe of hemlock, corroſive ſublimate,

and a ſolution of arſenic given internally---after her feveriſh ſymptoms were abated, by the uſe of ſaline medicines, alleviating her pains by opiates, and keeping the bowels open by mild aperients, ſhe was enabled to leave her bed, was totally freed from all pain, and has continued apparently ſo well for ſome months, that ſhe enjoys a ſtate of health ſuperior to what ſhe experienced for ſome time before her indiſpoſition began to be ſo ſevere.---I ſhould alſo have obſerved, that ſhe made uſe of an injection formed of a decoction of hemlock and poppy heads.

In all caſes of cancer, whether occult or ulcerated, the patients ſhould be kept on cooling diet---milk-whey---and milk, with the uſe of warm baths---and, perhaps, whilſt the cancer is in the former ſtate, wearing a hare or rabbit-ſkin over the part affected is extremely uſeful---the pain ſhould be moderated by occaſional bleeding, cooling purges, a ſpare, thin, cooling diet, and gentle opiates---cordials, exerciſe, and whatever can give too quick motion to the circulating fluids, or increaſe the heat of the machine, ſhould be avoided.

The purgatives proper to be uſed are Glauber's ſalt, ſal polychreſt, or ſome other of the cooling and gentle purgatives, (264, 265.)---and in caſes of febrile affections, ſaline mixtures, or nitrous medicines, (No. 1, 2.) are adviſeable---and for drink, milk and water, or ſarſaparilla decoction.

Hemlock joined with bark, and ſmall doſes of corroſive ſublimate, has by ſome been ranked among the moſt efficacious of all cancerous medicines—half a grain of the latter of which, diſſolved in ſpirits of wine,

and given in cancers of the face and noſe, night and morning, has been recommended as very beneficial—in cancers of the breaſt, an infuſion of deadly night-ſhade has been conſidered as the moſt uſeful.

Of hemlock, the freſh juice is thought more efficacious than the extract, beginning with four or five drops, and gradually increaſing the doſe.

With reſpect to external applications, various are the materials recommended in this point, ſuch as poultices of hemlock, gooſe-graſs, carrot, ſolutions of arſenic, lead, acetated ceruſs, fixable air, &c. but as it is our province only to treat on complaints medically, we muſt refer our readers to the works of ſurgical authors on this part of the ſubject.

§ 8. Clap, or Gonorrhoea virulenta; Pox, or the Lues venerea.

Notwithſtanding there are authors who conſider theſe as two diſtinct diſeaſes, and give it as their opinion, that they ariſe not from the ſame contagious matter, I ſhall beg leave to treat them under one and the ſame head, perfectly perſuaded that they are the ſame diſeaſe, under different conſtitutional circumſtances—the firſt acquired from the matter acting locally, the ſecond from its being abſorbed into the habit, and being more general in its effects—for I certainly have known the lues ariſe from the injudicious treatment of a gonorrhœa—and have ſeen patients who, having had commerce with the ſame woman, differently affected—the one labouring under a gonorrhœa only, the other completely poxed—Beſides, I have

known ſome men, who, in their intercourſe, when unfortunately diſeaſed, have never experienced the former, but were always affected with the latter.

I ſhall therefore conſider the gonorrhœa virulenta as the morbid matter acting in its ſimpleſt ſtate, and the lues in its more diffuſed and confirmed ſtate.

And, firſt, of the GONORRHOEA, improperly ſo called, as the term imports a flux of ſemen, from the Greek *goné*, ſemen, ſeed, and *reo*, fluo, to flow, which is not the caſe, the diſcharge being nothing more than a flow of mucus ſimilar to what iſſues from all inflamed ſurfaces. See EXUDATION, (472, 473.) I ſhall conſider it, therefore, as a VIRULENT MUCO-PURIFORM GLEET—the method of preventing which, after commerce with a ſuſpicious woman, has been pointed out, (145.)—the means muſt be ſupplied of diſcovering and curing it, when it has begun to exert itſelf.

DESCRIPTION. To this complaint both ſexes are equally liable—and it is generally allowed to manifeſt itſelf in each in the following manner:

IN THE MEN—ſome days, from four to ſix, ſeldom longer, after the reception of the contagious matter, there ariſes not an unpleaſant titillation in the glans of the penis, (66.)—in the orifice of the urethra, (65.) there appears a little thin liquid—ſoon after which the orifice ſwells, grows red, with a degree of heat, and is more than commonly open—in a ſmall ſpace of time there is a ſenſation in making of water, hot and ſcalding, and ſomething like the pricking of needles—a kind of matter, more viſcid than the former, and in larger quantity, makes its appearance, iſſuing from the

the urethra—that when the diſeaſe is more violent in its attack, through the courſe of the urethra, as far as the neck of the bladder, there is perceived a ſort of tightneſs or fullneſs, attended moſt commonly with erections, more frequent and painful than uſual—the inflammation now begins to increaſe, if left to itſelf, every day, conſequently the heat and pain, and the diſcharge puts on a yellow or greeniſh appearance, ſometimes mixed with bloody ſtreaks—if the inflammation runs high, there will not unfrequently be pains in the groins, teſticles, and loins—ſometimes a ſtrangury, (584.) will come on, and the patient at night will be tormented with erections, and a bending downwards of the penis, called CHORDEE.

At length all theſe ſymptoms grow milder as the inflammation abates—the diſcharge becomes white, and more uniform, and at laſt iſſues from the urethra white and viſcid like a fine thread, gradually diminiſhing, 'till appearing, now and then only, in drops, it totally ceaſes.

This is the deſcription when it purſues its natural courſe, accounted for by the inflammation receding by degrees.

IN THE WOMEN, it diſcovers itſelf by a ſenſe of itching at firſt in the external orifice of the vagina, (60.) and a more than common moiſture—in a few days the parts begin to inflame, grow hot, ſwell, and become very painful, occaſioning a ſcalding in making water, but not ſo painful as in men—add to theſe, a diſcharge of virulent diſcoloured muco-puriform matter makes its appearance; and, as the inflammation goes off, becomes

comes white and more viſcid, and by degrees entirely ceaſes.

With theſe appearances, we ſhould naturally conclude that a patient had received the virus; but this is not always the caſe; for the very ſame may ariſe from other cauſes not aſſociated with the venereal taint, as very ſevere exerciſe—hard riding—and immoderate drinking—the too copious uſe of very heating ſtimumulants—uſing too cauſtic injection by way of prevention—or, in fine, whatever will bring on an inflammation of thoſe parts. I mention this, becauſe ſometimes, particularly when theſe circumſtances ariſe in married people, it is eſſentially neceſſary to make the proper diſtinction, to ſave the peace of a family—as I have ſeen that peace nearly deſtroyed by the indiſcretion and raſhneſs of a practitioner, pronouncing in a huſband that diſcharge venereal, where the ties of connubial honour had never been infringed, and where the character of the wife was, with great juſtice, unſullied. In our opinions, therefore, we ſhould be extremely cautious, and wait for the appearance of ſome unequivocal ſymptom before we pronounce poſitively, particularly as the firſt ſtage of the diſeaſe may be cured in the ſame manner as ſhould be adviſed in caſes of ſimple inflammation without any venereal taint.

This complaint we conſider as a virulent muco-puriform gleet, ariſing from irritation, produced by venereal virus, after impure concubinage, attended with inflammation of the urethra, a flux from thence of puriform mucus, and a heat or ſcalding in making water.

The

The common term CLAP ariſes from the old French word *clapieres*, which were public ſhops, kept and inhabited by ſingle proſtitutes, and generally confined to particular parts of the town.

CURE. The indications are, to take off the inflammation, and give ſtrength afterwards to the veſſels, which have been weakened by too ſtrong action and diſtenſion.

If, therefore, at the onſet of the diſeaſe, the patient is of a plethoric habit, ſtrong ſtamina, poſſeſſed of great vaſcular irritability, we muſt have recourſe to bleeding and gentle aperients for two or three days, and plentiful dilution with watery fluids, ſuch as barley-water, linſeed-tea, marſh-mallow-tea, or ſolution of gum arabic in warm water—bathing the penis once or twice a day in warm milk and water, or poppy head decoction—keeping the glans clean, and ſupporting the teſtes by a ſuſpenſor.

The opening medicines may be given occaſionally, ſo that two or three ſtools may be procured every day, (No. 23, 24. 66. 97. 99. 135.) any of which, as beſt ſuits the patient, may be adminiſtered.

After three or four days, when the diſcharge begins to flow copiouſly, we muſt alleviate the inflammation by the ſedative injection, (No. 164.) which ſhould be thrown gently up the urethra two or three times a day, and retained for ſome time after each operation—when this has been uſed for four or five days, or ſometimes longer, 'till the painful ſymptoms appear to be yielding, and the diſcharge alters its colour, and grows more viſcid, to this may be added ſix or eight grains

of acetated ceruſs, and applied in the ſame manner, and in a few days more the cure will be often completed—but the diſcharge in ſome caſes will be of longer duration, from the relaxed ſtate of the veſſels, brought on by the preceding inflammation—when this is the caſe, the diſcharge is much whiter, or clear—the conſiſtence viſcid and ropy—under which circumſtances, we muſt have recourſe to the reſtringent injection, (No. 165.) or that made with calomel, (No. 166.) for this acts as a local ſtimulant, and may therefore be ſerviceable.

But though this method will generally ſucceed, there is ſometimes one ſymptom extremely troubleſome, and calls for particular attention, ſhould it be violent, which belongs to the firſt ſtage of this complaint, that is, the CHORDEE, ſo called from the Greek word *korde*—this is a contraction of the under part of the penis, which, when it is erected, and only then, is painful, and feels as if pulled down with a cord—this pain is chiefly under the frœnum, (a membranous ligament under the penis, which ties the præpuce to the glans,) and along the duct of the urethra—for the alleviation of this ſymptom, low living is particularly neceſſary—gentle exerciſe—avoiding all inebriating liquids—laſcivious converſation, and the company of lewd women—the penis may be bathed often in a day with warm milk and water, or the ſedative fomentation, (No. 111.) may be uſed, keeping the glans covered with the præpuce during the operation—and poultices of bread and milk may be applied to the parts.

Bleeding with leeches upon the part has been highly uſeful—wearing tight drawers, by which means the

penis

penis may be confined downwards to the thigh, and erections prevented, which greatly aggravate the painful affection.

Sometimes it will happen, that, from the violence of the irritation, the ſecretion of the mucus ſeems to be totally ſuſpended, or, at leaſt, conſiderably diminiſhed, ſo that no diſcharge, or only a very trifling one, takes place, though the other ſymptoms rage with great violence—under theſe circumſtances we muſt have recourſe to bleeding, emollient applications, fomentations, (No. 85 or 111.) and poultices—theſe are neceſſary to abate the irritation, and bring on the diſcharge—and here alſo opiates are neceſſary—afterwards we muſt have recourſe to the ſame remedies as we have before ſpecified.

Beſides the ſymptoms we have repeated, ſometimes uneaſineſs in the glands of the groins, and ſwelling, called *bubo*, and ſimilar effects in the teſticles, occaſioning pain and tumefactions, will occur; but theſe ariſe from ſympathy, where no abſorption of virus has taken place, and will yield to the ſame modes of treatment as above laid down, conſiſting of the cooling plan and topical ſedatives.

But when the virus is abſorbed into the habit, it gives riſe to variety of complaints, which have received various appellations from the parts affected, but are all owing to one and the ſame cauſe. The diſeaſe then is conſidered as the POX, or LUES VENEREA, which may be communicated to the habit, wherever the venereal virus gets inſinuated into any part which is wounded or ulcerated, or from ulcers formed by

its own acrimony, or from parts being touched by it where the ſkin is abraded—and the places where the acrimony firſt makes its entrance, are thoſe where the diſeaſe in general firſt makes its appearance—and as coition is the moſt common way of contracting it, ſo the firſt ſymptoms moſt frequently appear ſomewhere upon the genitals.

DESCRIPTION. We may juſtly ſuſpect that the virus is diffuſed through the general maſs of lymph, if the local ſymptoms, ſuch as ſhankers, buboes, &c. do not give way to the uſual methods of cure, or, when cured, if they break out again without any freſh contagion—but if, at the ſame time, we find ulcers breaking out in the throat, dry ſcabby eruptions on the ſkin, or hard callous tubercles, or puſtules covered with a yellow ſcab, and appearing chiefly on the hairy parts, we may be certain that the caſe is confirmed.

But ſometimes theſe ſymptoms appear without any diſeaſe of the genitals, and may be produced by other ſpecies of acrimony—it may be neceſſary to give what we conſidered their characteriſtic appearances.

Venereal eruptions have a branny appearance, and are ſuperficial, unattended with itching, and the ſcales being picked off, the ſkin appears of a reddiſh brown, or rather copper colour underneath.

The tubercles, or *puſtules*, ſeldom occupy the cheeks or the noſe, nor have a purulent apex, but are covered at top, either with a dry branny ſcurf, like the eruptions juſt mentioned, or elſe with a hard dry ſcab of a tawny yellow colour; they particularly break out amongſt

amongſt the hair, or near it, on the forehead or temples.

Venereal ulcers of the mouth firſt affect the tonſils, uvula, and fauces, then ſometimes, though very rarely, the gums—frequently extend to the noſe, and are callous or hard in their edges—they are circumſcribed, and, for the moſt part, circular, at leaſt they are confined to certain places—are generally hollow, and moſt commonly covered with a white or yellowiſh ſlough at the bottom—are red in their circumference, and frequently corrupt the ſubjacent bones—and are alſo, in general, combined with ſymptoms known to be venereal.

With reſpect to pains, thoſe which are deep ſeated, particularly of the arms, head, and ſhins, always fixed in the ſame place, and which affect the middle and more ſolid part of the bones of the arms and legs, and thoſe of the head, raging chiefly and with great violence in the fore part of the night, may be held as ſure ſigns of this diſeaſe—but other wandering pains of the membranes of the muſcles, and the ligaments of the joints, though they may ariſe from a venereal taint, they cannot be conſidered as certain ſigns without other ſymptoms of the lues are apparent at the ſame time.

Hard indolent ſwellings in different parts of the body, as in thoſe which are fleſhy—in the perioſteum—upon the tendons—upon the ligaments—or upon the bones, or thoſe extuberances at the verge of the anus, called *fici*—though they are all of them ſigns of a confirmed lues, if they are not preceded or accompanied by ſome

certain ſigns of this diſeaſe that are more certain and evident, we ſhould be very cautious of concluding that they proceeded from venereal virus; for they may depend upon ſome lurking ſcrophulous humour. And here we muſt obſerve, that when they derive their origin from this laſt cauſe, they are very ſeldom painful, or tend to inflame and ſuppurate, whereas thoſe which are venereal uſually do; and, if they lie upon a bone, generally produce a caries—upon the large bone of the leg, fore arm, and thoſe of the ſkull, theſe carious ulcers are moſt commonly met with, and when they are aſſociated with nocturnal pains, we never can heſitate about pronouncing their ſpecific nature.

Frequent abortions, or the excluſion of ſcabby, ulcerated, half-corrupted, and dead fœtuſes, happening without any manifeſt cauſe to diſturb the fœtus before its time, or to deſtroy it in the womb, may be reckoned as a ſure ſign of one of the parents being contaminated.

The more recent the complaint is the leſs difficult it will be to cure—and the habit of body is a material conſideration; for thoſe whoſe blood is in a mild and bland ſtate ſuffer leſs conſiderably than thoſe who have their juices acrimonious; for the diſeaſe is remarkably violent, and extremely difficult to cure, in ſcorbutic and ſcrophulous conſtitutions—and in a perſon already inclined to aſthma, pulmonary conſumption, dropſy, gout, or any other chronic diſorder, it is alſo more tedious, for the ſame reaſons, than in one whoſe habit is in a ſound and healthful ſtate; for as the original diſeaſe is increaſed by the acceſſion of the venereal virus, ſo the lues is aggravated

gravated by being joined to a new diſorder, inaſmuch as the conſtitution labours under complicated miſchiefs.

The more ſymptoms ariſe, and the more they affect the bones, ſo much the more difficult the cure; becauſe the venereal virus appears to occupy the minute parts of the habit, and be very univerſally diffuſed through the humours—but the malady becomes incurable if the virus affects the brain, the lungs, the liver, or any of the nobler internal parts, the patients will either ſink under that conſumption called tabes, or die apoplectic.

CAUSES. The *remote* or *inducing* are, all thoſe applications which inflame or dry up local venereal ulcerations, whether aſtringent given internally, or exhibited externally, or the diſcuſſion of buboes without the exhibition of mercury.

CURE. The indication is, to free the habit from the venereal contagion, which may always be done by mercury in ſome ſhape or other, either alone, or combined with ſome other medicines, which the peculiarity of the conſtitution may demand, as in every ſpecies of this complaint, or every complaint ariſing from this ſource, where we are called in before the virus has got firmly rooted in ſome of the more noble organs of vitality.

Different practitioners have been fond of different preparations of mercury, and different modes of throwing it into the habit.

Some adviſe calomel to be rubbed on the inſide of the lips, or cheek, to the quantity of four grains every

day, and let it be taken into the habit by the abſorbent ſyſtem.

Others prefer the mercurial ointment, (No. 167.) from half a dram to two drams to be rubbed on the inſide of the thighs above the knee once or twice a day for ſome ſpace of time, 'till all the venereal ſymptoms vaniſh.

Some have been fond of calcined mercury, (246.) and opium, half a grain of each formed into a pill, and taken night and morning, with a decoction of the woods, (No. 88.) increaſing the doſe to a grain each, or more.

Others have given the preference to the corroſive ſublimate ſolution, (No. 168.) mixed with half a pint of barley water, or decoction of the woods, (No. 88.) to be taken night and morning.

The patients ſhould lie in bed to ſweat after taking the medicine, and they ought to drink plentifully of whey, barley-water, or ſome ſuch liquid, throughout the day—and if the medicine acts not as a gentle aperient, a mild purge may be given occaſionally. It has been obſerved, that thoſe whom it purges two or three times a day get well ſooner than thoſe whom it does not purge—it very ſeldom affects the mouth, but promotes diſcharge by urine and the ſkin.—This courſe is to be continued ſome weeks after all the ſymptoms diſappear—and the decoction of the woods ſhould be taken for ſome time after the ſolution is left off.

Some prefer the ſublimate pills, (No. 169.) under the idea of their being more eaſily and ſafely taken in

greater

greater quantity, and from the ſtomach bearing it better in this way; for the pills, gradually diſſolving, are ſaid not to affect the ſtomach ſuddenly as the ſolution drank.

However, I think quickſilver mechanically divided into its moſt minute parts, which art is capable of completing, the beſt mode of adminiſtration, as in the mercurial gummous ſolution, (No. 170.) or the mercurial gummous pill, (No. 171.) as the form beſt pleaſes.

Theſe ſeldom produce ſalivation, if ſome purgative is exhibited every tenth day, and are ſaid quickly, ſafely, and pleaſantly to take off all the effects of venereal virus, where no chirurgical operation is neceſſary, and then to be highly uſeful in expediting the cure; for by this mode of adminiſtration, a ſufficient quantity of this powerful medicine may be thrown into the habit with the greateſt eaſe, without producing thoſe violent effects the ſaline mercurials are very apt to occaſion—and, perhaps, it is from this power of filling the habit by theſe mild means upon which its ſuperior efficacy depends.

For children, where mercury is neceſſary to be given, the mercurial ſyrup, (No. 172.) for obvious reaſons, claims the preference.

Where mercury given in theſe modes fail, which, under proper management, it rarely does, corroſive ſublimate has been recommended—eſteemed by many the moſt preferable preparation in venereal diſeaſes of the ſkin, and thoſe of the bones.

Some caſes there are, however, which will not yield to mercury alone, and ſome where ſucceſs has been

derived

derived by varying from time to time the mercurial preparations adminiſtered, and conjoining them frequently with cicuta—adminiſtering ſarſaparilla decoction, that of mezereon, (No. 173.) or bark with chalybeates, or cooling medicines, opiates, antiſpaſmodics, or cordials, ſuch as the conſtitutional circumſtances required. But here the ſagacity of the practitioner muſt be left to make the neceſſary diſtinction, as it is impoſſible to point out upon paper preciſely the deviations which may occur. We ſhall only obſerve, that where the diſeaſe reſiſts the mode we have laid down, the practitioner muſt labour to find the conſtitutional defect, and combine with mercury other remedies appropriated to its relief.

Beſides, there are now and then ſome venereal ſymptoms which will remain, notwithſtanding the mercurial courſe being properly perſiſted in, ſuch as nodes, and ſwellings of the perioſteum—theſe are ſometimes cured by the mezereon decoction, (No. 173.) or the compound one of ſarſaparilla perſiſted in for a long continuance of time, which will be aided much by the warmth of a ſouthern clime. As for other local affections, ſurgical aſſiſtance is not immediately neceſſary; for healing up of ſhankers, and diſcuſſing buboes by too haſty external applications, has often created miſchief—cleanlineſs and dry lint, in the firſt inſtance, and depending on internal remedies for the cure of both, is by much the ſoundeſt practice, and will almoſt always anſwer, if the complaints are ſimply venereal—if otherwiſe, and they obſtinately reſiſt this mode, the ſkill of a ſurgeon may become a neceſſary auxiliary.

With

With reſpect to a ſalivation, it is ſeldom, if ever at all, neceſſary—however, if it is determined on, before the courſe is begun, ſhould the patient be of a full habit, it is adviſeable to take away ſome blood—have recourſe to the warm or vapour bath, two or three times, and clear the ſtomach and bowels with a doſe of gentle phyſic—then let the patient put on a flannel ſhirt—and half a dram of mercurial ointment, (No. 167.) muſt be rubbed in on the inſide of the thighs every evening, gradually increaſing the quantity to two drams, or more, if the conſtitution requires it, 'till a ſpitting is brought on—and this muſt be kept up for a fortnight after every venereal ſymptom has diſappeared—the patient ſhould drink plentifully of ſome diluting liquid, as barley water with gum arabic, marſh-mallow tea, or ſuch like—and perſiſt in a light, eaſily digeſtible diet—avoid the cool air—and ſpit from a pint to a quart every day—the more gradually the ſalivation is brought on the better.

If we want to prevent the mercury from laying too ſtrong hold of the mouth, it muſt be diverted to the ſkin, by keeping the patient in a conſtant ſtate of perſpiration, from the warmth of the room, by drinking plentifully of warm, diluting watery liquids—or, ſhould he wiſh to avoid a ſpitting, the patient ſhould take from time to time ſome gentle phyſic, or go into a vapour bath; and this mode by ſome is thought the moſt adviſeable, as by theſe means we ſhall be enabled to throw in a large quantity of mercury—if inflammatory ſymptoms occur, we muſt have recourſe to bleeding, and confine the patient to a low diet, and copious dilution

with

with watery mucilaginous liquids—but, ſhould the ſtrength be much reduced, a nouriſhing diet, with wine, infuſion of bark, and ſome chalybeate preparation, and a free country air, are proper.

After the courſe is completed, and the cure performed, the patients ſhould return to their uſual modes of living, as has been repeatedly recommended, when recovering from any acute diſeaſe that has much haraſſed the conſtitution.

SECTION XX.

WE now are to treat of diſeaſes of the ſkin—ſome of which are conſidered merely as local complaints of the ſkin itſelf, beginning in, and not extending themſelves farther than that part of the machine; whilſt others depend on acrid ſtates of the humours, and are more generally diffuſive through the habit, putting on different appearances, according to the parts they affect, and very often alternating with thoſe on the ſkin; ſo that, on the expulſion of the acrimonious humours, they manifeſt themſelves on the exterior ſurface of the machine; and, on being repelled, occaſion internal affections.

We ſhall, therefore, form this claſs of complaints into two diviſions, after particulariſing ſome, and from thence deduce our general modes of cure.

And, firſt, of the

§ 1.

§ 1. ITCH;

ſo called from the effect it produces. Different are the cauſes from which this complaint may ariſe, as the ſcurvy, ſo called, lues venerea, &c.—but as theſe eruptions are only ſymptomatic, when thus derived, we ſhall confine ourſelves to the common itch.

DESCRIPTION. This is diſcoverable by ſmall ſpots about the ſize of a millet ſeed, or ſomewhat larger, which, broken by ſcratching, form a ſcab—itch violently—it is contagious, and chiefly affects the hands.

This diſorder chiefly begins between the fingers—red, hot veſicles, full of acrid ſerum, make their appearance, to which, by ſcratching, dry, rough ſcabs, attended with great itching, ſucceed.

But this, according to the ſtate of humours being more or leſs in a bland or acrimonious ſtate, puts on different appearances—hence the ſpots, inſtead of being merely veſicular, will have here and there appearances of matter contained in them, eſpecially if the diſeaſe has been of any continuance, and the patients very dirty—however, we may in general diſcover ſome ſpots manifeſting the true itch, particularly in the places where there is the moſt warmth, as between the fingers, in the bend of the arm, under the arm-pit, in the interior part below the knee.

Children are more ſubject to it than adults—delicate habits with ſoft ſmooth ſkins—and adults more than old people—all which is owing to the ſoftneſs and moiſ-

ture of the ſkin, and quicker ſenſibility of that part in one than another.

The CAUSE is univerſally believed to be, animalculæ in the ſkin—and, from the idea of this complaint ſo founded, a number of the appearances of this complaint is readily and ſatisfactorily accounted for, as why it is attended with itching—why caught by contagion—and why it returns after ſometimes being cured.

The itching is occaſioned by theſe animalculæ irritating the fibres in the places where they are lodged—hence raiſing a very minute bliſter, which, provoking us to ſcratch, is burſt, and ſerum then oozes out and forms a ſcab—and theſe animalculæ running under the cuticle, or ſcarf ſkin, (14.) depoſit their eggs in various parts, which, by the heat of the machine, are hatched, and thus the diſeaſe ſpreads itſelf—by contagion, it is communicated either by the animalculæ themſelves getting from the affected to the ſound perſon—or from touching any ſoft ſubſtance where they may be lodged—or from the perſon receiving ſome of the eggs upon the cuticle, which are rubbed into the furrows, and there lay a proper time for producing their young—and probably its return may be owing to the eggs not being totally deſtroyed in ſuch as were affected, and apparently cured.

Sometimes little prominent ſpots, itching and crowding together, neither excoriated nor ſcabby, will affect the ſkin, from a retention of acrid perſpirable matter, made more acrimonious by ſtagnating in the ſmall cryptæ, hollow places like cavities, containing ſome fluid,

fluid, and ſmall glands, called ſebaceous glands, of the ſkin and face—theſe are called TETTERS or HERPES, from *erpo*, repo, to creep, becauſe they creep from place to place, and, like the former, are only inherent in the part affected, and do not contaminate the maſs of fluids.

Theſe we give as ſpecimens of eruptions from external cauſes—theſe happen indiſcriminately to all people.

But in infants, or the younger claſs of mankind, the ſkin is often eroded with an acrimonious ſerum, and more frequently the hairy ſcalp in the ſkin, which begins at firſt to grow moiſt, with an itching—hence children rub their heads againſt the pillows, or any other thing they lie upon—when this diſeaſe is in its beginning, a rather acid and very nauſeous ſmell may be perceived—hence ſome have called ſuch eruptions ACORES, from acer, ſharp or ſour—afterwards the ſkin begins to grow red, becomes granulous, then they have named it HERPES MILIARIS, *miliary tetter*, becauſe the diſeaſe ſpreads and creeps along, and ſpots like millet-ſeed are prominent above the ſkin—others have called it FICOSUS, from ficus, a fig, becauſe in the ſkin the eruptions look like the ſmall round ſeeds of a fig cut in two—then is the efflux of ſerum augmented, which in a ſmall ſpace of time are concreted into foul ſcabs, which ſometimes are ſo thick, that they are penetrated with many very ſmall apertures, and now permit a ſomewhat thicker humour to ooze out; but that begins to adhere on all ſides to the cruſt or ſcab, increaſing its thickneſs, grows putrid, erodes

the

the ſkin, and there degenerate into deep ulcers, which pour forth an extremely fœtid humour; and, as a moth-worm deſtroys cloaths, ſo does this the ſkin—hence is derived the term

§ 2. TINEA,

a moth-worm. It has alſo been called FAVUS, from its reſemblance to a honey-comb—and in Engliſh SCALD-HEAD, from ſcald, ſcrufy or ſcabby, and head—when on the head it bears that name—when on the face, CRUSTA LACTEA, or *milk ſcab*—indeed they both have been reduced to the ſame ſpecies, and called HERPES PUSTULOSUS, *puſtulous tetter*, and this is conſidered as the mildeſt of all, infeſting the forehead and temples, but occurs only in infants one or two years old whilſt they make uſe of milk—hence the term CRUSTA LACTEA, or *milk ſcab*.

DESCRIPTION. This, to which we ſhall confine ourſelves, begins with numerous little veſicles, or bladdery appearances, full of an oily fluid, cohering together, at firſt white, afterwards yellow—theſe veſicles, dried and ſhrunk up, pour forth a ſmall quantity of colourleſs liquid milk, which, being dried, forms ſcabs; and they are either dry, or moiſt, white, or yellow, ſeldom brown—they itch, from whence the child ſcratches them off, which, being removed, the ſkin appears bright; but very often there appears ſmall apertures, whence again flows out a viſcid humour, forming ſcabs—the diſeaſe cured, the ſkin remains perfect, and free from any defect.

This

This affection ſometimes creeps to the poſterior part of the head, ears, chin, neck, and, indeed, through the whole ſurface of the body.

Groſs, fat children are liable to be affected with this, who abound with milk, who ſuck fat—greedy nurſes, full of milk—it alſo occurs in children replete with the ſeeds of the ſcrophula, (751.) not yet making its appearance, or whoſe blood is vitiated with acrimony, from the faults of nurſes—who are iraſcible, fond of liquor, ſcrophulous, or ſubject to any acrimony of their fluids.

§ 3. LEPROSY.

from the Greek word *lepros*, aſper, rough, becauſe the ſkin becomes rough with ſcales—and ELEPHANTIASIS, from *elephas*, an elephant, becauſe this diſorder creates ſome appearances in the legs like thoſe of an elephant. From the accounts given by ARETÆUS and CELSUS, many have taken the two diſeaſes to be the ſame, only in different degrees, ſuppoſing the LEPROSY more ſuperficial, the ELEPHANTIASIS more deep-ſeated, calling one the leproſy of the Greeks, the other the leproſy of the Arabians—but modern authors have divided them into different genera, and have given us ſeparate ſymptoms by which they may be diſtinguiſhed—however, we ſhall confine ourſelves to the former, as the elephantiaſis, though endemic in Egypt, ſeems totally aboliſhed in Europe.

DESCRIPTION. This is diſcoverable by hard, thick puſtules or tubercles, or dry ſcales like warts, rather of a reddiſh colour, affecting the face and hands,

without pain, ſometimes the whole body, though in the vicinity there is an itching, and ſometimes theſe puſtulous eruptions themſelves itch alſo—the ſkin frequently near them is rather paſty, commonly deſtitute of ſenſation, and the legs affected with a ſoft, pale, and inelaſtic ſwelling—ſometimes the eruptions ulcerate, and afterwards become ſcabby—if a number of theſe make their appearance, it is called the *moiſt* leproſy—if otherwiſe, the *dry*.

Sometimes different parts of the body will be covered with dry ſcales, which are white, and lay one upon the other like the ſcales of a fiſh—theſe are large, and, amongſt the people of Aſia, are ſurrounded with a red circle; and ſome have obſerved, that the eruptions were not only ſcaly, but ſmelt like fiſh—hence this kind of leproſy was called ICTHYOSIS, from the Greek word *ikthus*, piſcis, a fiſh.

Now, the tinea and leproſy we take to depend upon ſome acrimonious humour diffuſed through the habit, and, by the efforts of nature, depoſited upon the ſkin.

According, then, to the cauſes and conſtitutional circumſtances do we form our indications of cure; for having not, in the ITCH and TETTER here recited, occaſion to fear any ill conſequences to be derived from repelling any humour into the habit, and the cauſes creating them being merely external, external applications will be ſufficient to form a radical cure, at leaſt very trifling aſſiſtance will be requiſite from internal remedies—whilſt in the SCALD HEAD and LEPROSY, ſuch internal remedies are neceſſary as will clear the habit

habit of thoſe acrimonious humours, by promoting regularly and conſtantly ſome of the natural evacuations, particularly that of perſpiration and urine, and, at the ſame time, ſo ſupporting the ſtrength of the ſyſtem, and eſpecially that of the digeſtive powers, that ſoft, mild, nutritious fluids may ſupply the place of thoſe which are evacuated, and the diſpoſition which the conſtitution has to generate acrimony ſo offenſive may be altered as much as in the power of medical aid to accompliſh—and indeed the ſame modes will hold good in all the variety of eruptive complaints, unattended with any fever of moment, which are of long continuance, and come under the denomination of land ſcurvy, &c. and which we have not before ſpecified.

In order, therefore, to exemplify the different modes, we ſhall proceed to ſpeak of the cure of the four juſt now mentioned—and, firſt, of the itch, whoſe

CHARACTERISTIC SIGNS are, puſtules, or itching ſmall ulcers, contagious, and chiefly affecting the hands, from ſmall animalculæ irritating the ſkin below the cuticle.

CURE. In ſtrong robuſt conſtitutions, it may be adviſeable to take away ſome blood, and give a doſe or two of gentle phyſic—then let the ſkin be well cleaned, by going into the warm bath, and afterwards have recourſe to ſome of the applications, (from No. 174 to 177.)—With regard to ſulphur, we muſt obſerve, that what is called ſulphur vivum is preferable in theſe caſes as an external application, becauſe, in forming flowers, it loſes much of its efficacy—the flowers are

alſo ordered to be taken internally, as it is ſuppoſed that ſome of the animalculæ might be too deep-ſeated for the ointment to affect them, hence might they be reached by the ſteams paſſing through the ſkin—indeed, coupled with a little cream of tartar, it makes an agreeable opening and diaphoretic medicine.

With the mercurial waſh and ointment it will be ſufficient to waſh or anoint the parts affected, or to rub ſome of the latter into the palms of the hands or wriſts—and it would be right now and then to take ſome gentle phyſic, and drink copiouſly of ſome aqueous liquid, to prevent the mercury from affecting the mouth.

If the complaint proves obſtinate, as it will ſometimes do if it is of the dry ſpecies, warm baths may be uſed during the external applications, and ſmall doſes of antimonials, (278.) and mercurials, (246.) exhibited with a decoction of the woods, (No. 88, 89.)—but theſe are ſeldom neceſſary, though they are uſeful as auxiliaries, where the acrid ſtate of the humours is a concomitant. Notwithſtanding mercurials have been adviſed, and almoſt always ſucceed in the cure of this complaint, there have been inſtances where it has continued, even after the patient has gone through a ſalivation—under theſe circumſtances, where mercury has not been efficacious, ſulphur is our dernier reſort.

With regard to the herpes or tetter, it is cured by topical applications, and of ſuch kinds as by their ſtimulus and aſtringency give ſtrength and firmneſs to the part affected, ſo that the matter of perſpiration is made to paſs off freely, and prevented from accumulating

lating on account of the weakneſs and relaxed ſtate of the places wherein the complaint manifeſts itſelf—of remedies of this ſort there are a great variety, ſuch as ink, water of kali, oil from burnt paper, rags or wood which is acrid; this is to be diluted with faſting ſaliva, and the part affected anointed with it—but the moſt preferable is a waſh formed of ten grains of muriated quickſilver diſſolved in a pint of water—ſolutions of the preparations of lead, (210.) have been in the milder kind of this diſeaſe uſeful and efficacious.

The TINEA, or SCALD HEAD, that ſpecies to which we confine ourſelves, has for its CHARACTERISTIC SIGNS, ſmall ulcers in the ſkin of the hairy ſcalp, at the roots of the hair, oozing out a humour running into a white, dryiſh ſcab—when this happens to children otherwiſe apparently healthy, the body ſhould be kept open with mild aperients, ſuch as magneſia and rhubarb, or Polychreſt ſalt, in properly proportioned doſes—the hair kept cloſe cut and ſhort—the parts clean, by waſhing them with ſoap and water—and a moderate diet preſcribed.

Indeed, it is uſually cured by weaning the child, or changing the nurſe, whoſe milk is younger, thinner, and leſs loaded with oily matter.

Theſe children get the teeth later, and with more difficulty—their bowels are coſtive—and often there appears a propenſity to rickets—without the eruption ſhould be imprudently repelled, nothing elſe is neceſſary to be done—but if it ſhould be attended with an acrimony of the humours, and ſpreads itſelf to different parts of the body, a young nurſe ſhould be

choſen whoſe milk is bland and well diluted, not rich and thick; ſhe therefore ſhould live on liquid or moiſtening food—at the ſame time, if reſtleſs, gentle opiates may be now and then given to procure ſleep.

Should this complaint prove obſtinate, and be attended with great itching, a paleneſs of the countenance, and the fleſhy parts appear relaxed and flabby, here we muſt have recourſe to ſmall doſes of calomel, as an alterative, and antimonial wine, with the ſame intent, proportioning the doſes to the ſtate of the ſtomach and bowels, that the one may not purge, nor the other occaſion too conſtant ſickneſs or nauſea.

To allay the itching, the head may be rubbed with oil of ſweet almonds—ſeveral recommend the pitch ointment of the Edinburgh Diſpenſatory, which I have found effectual—cream mixed with chalk in fine powder—ſolutions of the preparations of lead, and that of muriated quickſilver, as in caſe of tetter, may be had recourſe to.

In every eruption of the tettery kind to which children are liable, of which the ſcald head we conſider one, Mr. Bell aſſerts, the ſulphur, in ſome form or other, commonly proves the moſt effectual application, therefore, in failure of other remedies, ſulphur ſhould be employed.

However, of theſe remedies I ſhould recommend a very cautious uſe, becauſe I have ſeen great miſchiefs occur from the injudicious application of ſtimulants and repellents in ſome caſes, from the idea of the complaint being merely cuticular, borrowing nothing from the habit in general—indeed, ſo obvious has it been,

that

that ſoon after the repulſion of the humour, coughs, and febrile ſymptoms have come on—uneaſineſs in the bowels—perceptible emaciation, which, upon the re-appearance of the complaint, have all gone off—in a country town, where it was the practice of the old women to cure the ſcald head with pepper and butter, it very often proved fatal.

I ſhould therefore adviſe that cleanlineſs, change of nurſes, or weaning, with the uſe of gentle purgatives, ſhould be firſt tried—if theſe ſucceeded not, the uſe of alteratives and antimonials, or the ponderous muriated earth, ſhould be tried for ſome time, and iſſues, before recourſe ſhould be had to any of the preparations of lead, mercury, or ſulphur, then they might be tried with ſafety, as I have from experience been convinced—and theſe iſſues ſhould be continued 'till the complaint be totally cured, and the conſtitution has recovered its uſual ſtrength and firmneſs—when this has been repelled, it has been thought adviſeable to endeavour to ſolicit the complaint back again, if any internal ſymptoms manifeſted themſelves, which, it is ſaid, may be done by the application of the leaves of bete to the part originally affected; but of this I have had no experience—it might, however, be tried, whilſt the other internal remedies above recommended to carry off the humour were perſiſted in.

In the CURE of the LEPROSY, whoſe CHARACTERISTIC SYMPTOMS are, the ſkin rough, with white eſchars, which have a branny appearance, and are chapped—ſometimes moiſt underneath and itching—warm baths, a clear pure air, with a thin laxative

diet, are eſſentially neceſſary—and alſo the uſe of antimonials and mercurials—though a ſalivation exaſperates this diſeaſe, ſix grains of calomel, with one of camphor, may be exhibited once a week, and purged off with a common purging draught in the morning.

Dr. Russel aſſerts, he cured the dry leproſy in the courſe of a month, by giving a bolus made of the fleſh of vipers, twenty grains, and one of camphor, with a little conſerve of roſes, every night, and the morning following half a pint of ſea water—viper broth, or chicken broth with vipers, has been conſidered as beneficial—but the greateſt ſucceſs has been attributed to the decoction of the interior part of the elm-tree, (No. 178.) which ſhould be continued ſeveral weeks—and ſhould, by its uſe, the efflorescences be augmented, it is a pleaſing ſymptom, as it promiſes a ſalutary termination.

We have had inſtances of this complaint, where the ſymptoms have put on a high degree of violence, being cured by bark and ſaſſafras, (No. 179.) and the application of a ſtimulant lotion, (No. 180.) night and morning, a perpetual bliſter being at the ſame time kept open between the ſhoulders.

In complaints of this claſs I have found great benefit from the judicious uſe of mercurials and antimonials, intermediately giving the ponderous muriated earth, with the compound decoction of ſarſaparilla of the London Diſpenſatory—to a quart of which I have occaſionally added ſix drams of Peruvian bark.

Indeed, in all eruptive complaints which are united with, and proceed from an acrimony of the fluids internally

ternally diffuſed, and manifeſt themſelves by ſymptoms which beſpeak general affections of the habit, or internal local ones, I ſhould recommend the gentle evacuating and tonic plan, on the principles we have ſpecified in the former part of this ſection; and ſhall now proceed to ſpeak of ſome complaints which have been detached from the general arrangement intentionally, and one accidentally omitted.

SECTION XXI.

§ 1. Inflammation of the Womb.

DESCRIPTION. This complaint is attended with heat, tenſion, ſwelling, and pain in the lower part of the belly—vomiting—the mouth of the womb is ſo painful, that it cannot bear the touch, and is drawn inwards—there is a continued fever, ſometimes of the remittent kind, accompanied with chillneſs, delirium, toſſing about of the body—the head, though chiefly the fore part, is painful, and alſo the eyes—convulſions of the neck, hands, and feet come on—the pain extends itſelf to the groins, thighs, midriff, and collar bones, aſſociated with difficulty of breathing and pleuritic ſymptoms;—nauſea—vomiting—hiccough—coſtiveneſs—and pain in making water alſo manifeſt themſelves.

In the beginning the pulſe is full and quick, afterwards weak and frequent—to which are joined faint-

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ings—coldneſs of the extremities—drowſineſs—with a number of other dangerous and violent ſymptoms.

CAUSES. The womb may be affected with this complaint from all thoſe cauſes which are apt to induce inflammatory affections in other parts. (See Inflammation, p. 468, &c.)—obſtructed menſes—or any thing which will determine the blood too freely to the womb, and create an accumulation more than naturally large in that organ. But authors have very judiciouſly divided it into three ſpecies—1ſt, Into that which affects lying-in women—2d, That which is attended with a malignant fever—and, 3d, That which deduces its origin from the milk.

IN THE FIRST OF THESE, a ſuppreſſion of lochia often precedes the complaint, or it is brought on by violent efforts of the accoucheur in difficult labours, blows, compreſſion, laceration from the fingers, or the uſe of inſtruments, retention of coagulated blood, and great force exerted in replacing a prolapſus, or falling down of the womb.

CURE. Now, where only the ſymptoms of a common inflammation are the concomitants, ſuch as local pain, heat, tenſion, and the pulſe full, quick, and hard, bleeding muſt be had recourſe to—fomentations and poultices—the patient ſhould drink copiouſly of watery fluids—and take of nitrous, ſaline, and antimonial medicines—and, in fine, the method purſued as in other inflammatory caſes. (See Inflammation, &c.) Beſides, here all external preſſure is to be avoided—if neceſſary, the urine muſt be drawn off by the catheter, and the rectum (49.) emptied by glyſters occaſionally;—but if the complaint ariſes from a

ſuppreſſion

ſuppreſſion of the lochia, and, notwithſtanding all our efforts, the pain ſhould continue, opiates may ſometimes be given with ſucceſs; for this may proceed from ſome ſpaſmodic affection, occaſioned by irritation.

THE SECOND moſt commonly proceeds from internal cauſes, as putrid acrid matter, or a tranſlation of that which creates eryſipelas to the uterus, diſcoverable by a burning heat internally—delirium—black dry tongue, and at the ſame time coldneſs of the extremities, with a frequent and irregular pulſe.

CURE. Here are required a freer uſe of opiates and diaphoretics, to determine the fluids to the ſkin, and evacuate the offending matter, becauſe theſe caſes ſeem more to depend upon irritating cauſes than mere inflammations—the patients, therefore, ſhould be kept much in bed, moderately warm—drink freely of barley water, thin gruel, and theſe frequently repeated—go occaſionally into the warm baths—and gentle diaphoretics (278.) ſhould be inſiſted upon, as antimonials in ſmall doſes, acetated ammonia, (278, 279.) nitre, (272.) and ſuch like.

THE THIRD, is an acute febrile diſeaſe, attended with a ſwelling of the belly—tenſion—pain of the womb—thirſt—head-ach—delirium—dryneſs of the tongue—diſturbed ſleep, although the lochia flow freely—and this inflammation ſometimes precedes, ſometimes ſucceeds delivery.

CURE. Here we ſhould purſue the mode ſimilar to what we have laid down in inteſtinal inflammation—large evacuations, by bleeding, purging—with diuretics, and a thin ſpare regimen—the milk alſo ſhould

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be ſolicited into the breaſts by every poſſible means, ſetting the child early to the breaſts, applying cupping glaſſes, ſaline mixtures, and antimonial preparations, given at proper intervals, and the breaſts kept warm.

With reſpect to bleeding, ſome have thought it unneceſſary, becauſe of the diſcharge of the lochia; but in this caſe a larger quantity by much than what flows in that caſe is neceſſary to be taken, that death may be avoided, and the depoſition of milk in the abdomen, or a milk abſceſs, may be prevented;—for this diſeaſe has been ſaid to be fatal to many women—and in opening the bodies of thoſe who have died of this diſeaſe, a milky, thin, or grumous matter, to the quantity of a pint, has been effuſed in the abdomen.

But if the fever ſhould be moderate, the lochia, ſweats, and flow of milk into the breaſts proper and natural—there ſhould be no ſwelling of the abdomen—no head-ach—particularly if there ſhould be a looſeneſs and bilious ſtools, it will be ſufficient to ſupport theſe evacuations by drinking copiouſly mild thin gruel—taking oily medicines, and the uſe of ſheathing glyſters. See PUERPERAL FEVER. (375.)

Now, from the accounts given of theſe three ſpecies, the indications of cure are plainly pointed out to us.—IN THE FIRST, we endeavour to take off the inflammation by the common mode directed for ſubduing inflammatory complaints of other parts.—IN THE SECOND, we attempt to evacuate the acrimony.—And IN THE LAST, to prevent the coagulation of the milk, or its effuſion into parts for which it is not deſtined by nature,

nature, by ſoliciting into, and keeping it in its natural reſervoirs.

§ 2. MENSES;

ſo called from the Greek word *mene*, menſis, a month, from that being the uſual time of their periodic appearance—they are called, for the ſame reaſon, alſo MENSTRUA, or CATAMENIA—when theſe flow in their natural ſtate, there is a flux of blood from the veſſels of the womb and vagina, (59, 60.) every month—in ſome every three weeks—they generally firſt make their appearance about the age of fourteen or fifteen—ſometimes at an earlier period—and go off, or ceaſe to flow, about the age of forty-nine or fifty—ſometimes ſooner, if they have made their appearance at an earlier period than common—this diſcharge, though very ſalutary when it flows regularly, and in due proportion, is always attended with diſagreeable conſequences when it is either too profuſe, too defective, or altogether obſtructed.

When the menſes flow too copiouſly, continue too long, or return too frequently, ſo that the machine feels evident increaſe of debility, this we conſider as a diſeaſe, called

MENORHAGIA, from *mene*, menſis, and *reo*, fluo, to flow, which may ariſe from too rapid circulation of the blood, hence called ACTIVE—or from too relaxed a ſtate of the uterine veſſels, then called PASSIVE.

IN THE FIRST CASE, it is generally preceded by head-ach—oppreſſed breathing, attended with heat—thirſt—quick full pulſe—pain of the loins—often down

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the thighs—and other febrile ſymptoms—in this caſe we muſt be exceedingly careful that we do not attempt to ſtop the flux of blood too ſuddenly, not 'till the veſſels have ſufficiently emptied themſelves, or that has been performed by art—then we are to proceed on the cooling plan, and order ſuch remedies as will abate the too great vaſcular action, ſuch as we preſcribed in caſes of ACTIVE hæmorrhages when on that ſubject, (622, &c.) ſuch as bleeding, nitrous medicines given copiouſly, with cooling emulſions, and a ſpare cool diet, and keeping the body open, is eſſentially neceſſary—care ſhould be taken to avoid heat—violent agitation, and exerciſe, and every mental, as well as corporeal exertion; for theſe will give too great force to the circulating fluids, and contribute to increaſe the complaint.

But at the early period of the diſeaſe, if what is here recommended ſhould fail of ſucceſs, ſmall doſes of ipecacoanha, (No. 133.) or tartarized antimony, (No. 6, 7.) (259.) ſufficient to create nauſea, or gentle vomiting; for theſe take off ſpaſmodic conſtriction from the ſurface, divert the flow of humours more generally to the external parts, and hence render the circulation more equal.

On the other hand, when the face becomes pallid, the breathing is affected by very moderate exerciſe—the back feels weak and painful from continuing in one poſture—the pulſe grows feeble—the extremities become unuſually cold—in the evening the feet appear paſty, and an uncommon wearineſs from exerciſe, this diſeaſe muſt be conſidered of the paſſive kind;

and

and ſo may it alſo if there are frequent returns of the diſeaſe; and in the intervals of the periodic diſcharge, the whites, which we ſhall next explain, conſtantly attend.

CURE. In this caſe we muſt moderate the diſcharge, by cold wet applications to the pubes and external parts—ſpunge tents dipped in vinegar and water paſſed up the vagina—the patient avoiding an erect poſture as much as poſſible—lying cool on hair mattreſſes—by ſhunning external heat—uſing a light and cool diet—taking cool aſtringent drinks, with aſtringents, (No. 56. 138.) and opiates internally—keeping the body open with gentle aperients, and avoiding every cauſe of irritation.

And, in order to prevent a relapſe, we muſt endeavour to invigorate and give ſtrength to the ſyſtem, by cold bathing, preparations of iron, and bark, and moderate exerciſe in a clear cool air.

The diet ſhould be of nutritious kind—and, during the flux, all thoſe things called cordials ſhould be avoided—though in ſome paſſive caſes, where the flow is almoſt conſtant, joined with tonic remedies, they may be highly uſeful—and gentle exerciſe in a carriage has been ſaid to moderate and contribute to ſuppreſs the ſanguinary diſcharge.

§ 3. LEUCORRHOEA;

ſo called from the Greek *leukos*, albus, white, and *reo*, fluo, to flow, becauſe of the diſcharge being generally of a white colour—alſo FLUOR ALBUS, white flux—it is vulgarly called the WHITES, for the ſame reaſon—this

is

is a diſcharge of ſerous or mucous matter, ſometimes white, at others yelloviſh, browniſh, or rather greeniſh, from the womb and vagina.

DESCRIPTION. At firſt this diſcharge is mild and ſerous, which afterwards, by not paſſing freely off, or ſtagnating, becomes more thick and acrimonious, and will be different with regard to its colour and ſmell—indeed, thoſe ſymptoms which we have enumerated as concomitants to a morbid flux of the menſes from a paſſive cauſe, generally here attend—and when the diſcharge is exceſſive, or of any long continuance, pains and weakneſs of the loins—indigeſtion—and other ſymptoms of debility—ſwelling of the eye-lids—thick urine—palpitation of the heart—frequent faintings, are almoſt always conſtant concomitants;—but in the early ſtages they do not frequently make their appearance to any great degree.

Indeed, the colour and conſiſtence of the diſcharge alter, from a variety of circumſtances, according to the nature and duration of the diſeaſe, ſeaſon, climate, and conſtitution—in warm weather, groſs habits neglecting to keep the parts clean, from quantity or acrimony painful excoriations are occaſioned, inſomuch, that ſometimes it has been difficult to diſtinguiſh it from the effect of ſome venereal taint—and here it will be neceſſary to advert to ſome concomitant circumſtances—if a diſcharge comes on ſuddenly, with ſymptoms of heat and pain—if it is not attended with weakneſs or pain in the back—if the patient appears to be of a healthful ſtrong ſtamina—has had no children—no miſcarriages—nor ſevere or copious flow of

the menſes—if the diſcharge ſhould be thin and much diſcoloured at firſt, we may then ſuſpect ſomething of venereal affection in the caſe—indeed, I have known many cured of what they called the whites by means to which a virulent gleet, or clap, moſt readily yield.

However, the WHITES often occur in women who are ſubject to too copious a flow of the menſes, or have them too frequently return, and are liable to this from cauſes which weaken the veſſels of the womb and vagina—or are of a relaxed or debilitated conſtitution—hence it generally affects women advanced in life, particularly thoſe who have had children, have often miſcarried, menſtruated irregularly—alſo thoſe who lead an inactive life—thoſe who are full and jolly, and whoſe ſolids are looſe and flabby—the more recent and whiter the diſcharge, the more eaſy to cure the diſeaſe—the longer the continuance, and the more green or brown the colour, the more difficult.

CAUSES. Are all ſuch as occaſion a collection of ſerum, and weaken the veſſels of the parts affected, or the habit in general—hence living in moiſt air—feeding on too viſcid food—leading a life of indolence—uſing too frequently warm baths—an immoderate flow, or an obſtruction of the menſes—or it may be occaſioned by a tranſlation of humours to the womb and vagina.

CURE. Now it will appear obvious, as we conſider the nature of the diſeaſe, whether *local* or *general*, ſo muſt we adapt our remedies, whether it depends upon the relaxed ſtate of the veſſels of the womb primarily and principally, or we attribute it to the debi-

litated ſtate of the ſyſtem—in the former, we may place much dependance upon external applications of the aſtringent claſs—in the latter, ſome medicines internally ſhould be exhibited, which will not only give ſtrength to the conſtitution, but contribute to maintain it in that ſtate—hence, then, according to the different circumſtances of the conſtitution, we muſt regulate our modes of cure.

When it occurs in thoſe who live ſedentary and indolent lives, indulging in luxuries, and ſupporting themſelves by a full rich diet, by which the habit will be loaded with groſs humours, their mode ſhould be altered to a diet which is more ſparing, and a cooling regimen, having frequent recourſe to purgatives, and a more active ſtate of life—but to thoſe of a more weak, relaxed ſtate of ſolids, we muſt invigorate the conſtitution in the ſame manner as directed in too copious flow of the menſes from a paſſive cauſe, (799.)—here it is of great uſe to keep the parts clean by frequent partial baths of cold water—and after gentle evacuations, in thoſe who have lived indolently and luxuriouſly, an aſtringent waſh of the gentle kind may be made uſe of, ſuch as the reſtringent injection, (No. 165.) with the addition of eleven ounces of infuſion of roſes—in thoſe of relaxed habits, injections of bark with alum, alum water, infuſion of tormentil roots, with litharge water, or ſome ſuch aſtringent preparations; for they are ſaid to diminiſh the diſcharge, and, in recent caſes, entirely remove it.

Sometimes, from a long continuance of this diſeaſe, the humours are apt to be acrimonious and irritating,

and

and aſſiſt in ſupporting the diſcharge; then hartſhorn jellies, or thoſe of iſinglaſs, are agreeable and uſeful auxiliaries.

Sometimes thoſe ſtimulants which act upon the urinary paſſages, and communicate their effects to the womb and vagina, have been thought beneficial in theſe caſes—Spaniſh flies in tincture, joined with ſome of the preparations of iron, and bark, have produced good effects—balſam of copaiva—balſam of turpentine, and thoſe of this claſs, have been conſidered as uſeful.

But, in caſes of long ſtanding, I have ſeen much benefit derived, during the uſe of aſtringent medicines, from a ſtimulating plaiſter or bliſter applied to the region of the ſacrum, or lower vertebræ of the back.

If the complaint proceeds from, or is ſupported by a vitiated ſtate of fluids, *that* ſhould be corrected by the uſe of antimonials and mercurials, taken for ſome time, with a decoction of the woods in lime water—and in this ſtate of the conſtitution iſſues are extremely ſerviceable—after this courſe, local applications and aſtringents internally bid fair to produce thoſe good effects, which they fail of doing without ſuch an alterative plan.

§ 4. We are now to treat of the menſes in a different point of view, where they are either *retained, ſuppreſſed, or flow with difficulty*, and theſe are all comprized under the term AMENORRHOEA, from the Greek *a, alpha*, non, *mene*, menſis, month, and *reo*, fluo to flow.

THE FIRST OF THESE, or THE RETENTION of the menſes, happens in women arrived at a ſtate of puberty,

berty, in whom, after the uſual time of their firſt appearance, they do not now manifeſt themſelves; and when at the ſame time there are various affections, ſhewing the machine to be in a ſtate of diſeaſe.

THE SECOND, or a SUPPRESSION, in adults, in whom the menſes, which have been accuſtomed to flow, are ſtopt.

THE THIRD is where they do flow, but too ſparingly, attended with pain.

Now in the firſt of theſe that diſeaſe CHLOROSIS, from the Greek *kloros*, viridis, green, or *pallidus*, pale, from the colour of the countenance, called here the GREEN SICKNESS, is induced.

DESCRIPTION. This complaint is attended with a pallid or yellowiſh countenance, unaſſociated with any yellowneſs of the eyes, like that in the jaundice—ſmall and weak pulſe, at the ſame time languid—a want of alertneſs in motion, with laſſitude and debility—the patients are affected with nauſea, vomiting, often throw up wind, and have pain in the ſtomach—and, though they want appetite for common food, have a deſire for ſuch things as are not uſed for food, as chalk, ſlates, or other abſorbents, green fruit—they are coſtive, and have other ſymptoms of indigeſtion—the whole body is pale and flaccid—and the feet and great part of the body become paſty—by quick motion, particularly going up ſtairs, or climbing up hill, the breathing is laborious---palpitations affect the heart---fainting---ſometimes a pain or giddineſs of the head comes on, but more certainly pains of the back, loins, and hips. Now theſe ſymptoms are among the cer-

tain

tain ſigns of this diſeaſe when advanced to any conſiderable degree; indeed, in the earlier ſtages moſt of them prevail, but not to that exceſs.

As the menſes appear at different ages, we muſt not ſtile a perſon diſeaſed becauſe they flow not at a given time---but if, after the common time has elapſed, there appear evident ſigns of indiſpoſition, ſuch as we have recited in their inferior degree, and leſs numerous, we need not heſitate in pronouncing the retention a diſeaſe.

CAUSES. A debility of the ſyſtem in general, bringing on a ſimilar ſtate in the veſſels of the womb, whence a general languid and local uterine circulation, occaſioning the menſes to be retained.

CURE. The indications are, to ſtrengthen the ſyſtem, and promote the action of the veſſels, particularly thoſe of the womb---and theſe are done chiefly by bark, tormentil root, and ſuch like, joined with preparations of iron and bitters---the patients ought to live on a generous diet, go into the cold bath, and uſe exerciſe---theſe will invigorate the conſtitution---afterwards, aloetic purges are uſeful---frictions of the lower extremities, and bathing the feet in warm water---indeed, all thoſe purgatives are of ſervice which ſtimulate the rectum, as aloes, rhubarb, black hellebore, and calomel; for they communicate ſimilar effects to the veſſels of the womb.

Bliſtering the lower part of the back, or ſtimulating plaiſters applied there, may be advantageouſly recommended.

Where this debility is brought on, as it ſometimes is, by continued uneaſineſs of mind, occaſioned by diſappointments, or tedious delay in love, matrimony is an efficacious remedy---ſome alſo have great faith in the electric ſhock; and, indeed, as a ſtimulant, electricity bids fair to be of great ſervice.

THE SECOND SPECIES, or SUPPRESSION of the menſes ariſes from a different cauſe, from ſome reſiſtance in the extremities of the uterine veſſels, originating moſt frequently from ſpaſmodic conſtriction of thoſe veſſels, or, according to ſome, from a rigidity of them—the former ſeems to be the general cauſe, as it deduces its origin from cold—fear—irregular paſſions—fullneſs—or ſomething ſimilar—and this complaint comes on after the menſtrual diſcharges have gone on for ſome time regularly; for, on their firſt appearance, they will ſometimes ſtop, and not return for a year, or perhaps a longer ſpace—but, under this circumſtance, we are not to conſider this as a diſeaſe, without it is attended with ſome morbid ſymptoms, ſuch as periodic fluxes of blood from ſome other parts, as from the noſe, eyes, ears, inteſtines, ſtomach, lungs, &c. which will ſometimes occur in caſes of ſuppreſſion, hyſteric ſymptoms, coſtiveneſs, frequent colic pains; for theſe in this ſpecies are very often concomitants.

CURE. The indications of cure here are, to take off the ſpaſmodic conſtriction on the uterine veſſels, which we attempt by that claſs of medicines called emenagogues, or promoters of the menſes, (283.) amongſt which I conſider ſabine, (228. 230.) as the moſt certain.

However,

However, it is often ſufficient for the patient to keep quiet---avoid cold, and irregularities of diet---go into the warm bath, or ſit up in a half bath, or let ſteams of warm water be directed to the womb—or warm fomentations may be applied on the lower part of the abdomen, round the hips, and the tops of the thighs.

But we muſt obſerve, that theſe applications are only to be had recourſe to at the time when we expect nature would have made her efforts in a healthful ſtate---and in ſome caſes the patient will feel ſome ſymptoms ſimilar to what uſually manifeſt themſelves before the coming on of the menſtrual diſcharge at each period---it is then we ſhould attempt to aſſiſt her, as moſt likely to be ſucceſsful—but ſhould the diſeaſe not yield to theſe applications, the remedies adviſed in retention of the menſes, (805.) may be tried, particularly aloetic purges, electricity, and antiſpaſmodics---though here we ſhould be cautious in the uſe of tonic remedies and cold bathing---we ſhould rather depend upon ſuch as were more relaxing.

This complaint is very often brought on by other diſeaſes of the conſtitution, and then is only ſymptomatic, to cure which we muſt advert to the cauſe, of whatever nature it is, and apply our remedies accordingly.

THE THIRD SPECIES, or painful menſtruation, generally affects the whole ſyſtem ſympathetically, and the parts which lie contiguous to the womb, producing pains in the loins, hips, and down the thighs---wandering pains of the lower part of the abdomen, of

the head---occaſioning alſo pain at the ſtomach—giddineſs of the head—frequently ſickneſs and retchings—a number of hyſteric ſymptoms—and ſometimes epileptic fits—and other nervous ſymptoms, notwithſtanding the menſes continue to flow for ſome time.

This diſeaſe chiefly affects viragos, who are of full habits, and thoſe who are laſcivious, and is ſuppoſed to deduce its origin partly from the weaker action of the veſſels of the womb; and, perhaps, more particularly from ſome ſpaſmodic affections of the extreme veſſels of that organ.

CURE. Pregnancy, for the moſt part, performs a radical cure; but the ſymptoms may be alleviated by what has been recommended in a ſuppreſſion, (806.) made uſe of ſome days before the coming on of the menſes—to which are recommended drinking every night before bed time, and in ſmaller quantities through the day, of any mild watery drink, a little warm, as balm tea, thin gruel, barley water, or ſuch like, or ſlight infuſions of mint or pennyroyal—frequent lying in an horizontal poſture—or giving occaſionally a ſpoonful of oil mixed with twenty drops of tincture of opium; or opiates, where oil is diſagreeable, by themſelves.

§ 5. THE HYSTERIC DISEASE, CALLED HYSTERIA, from the Greek *uſteros*, uterus, the womb, becauſe the ancients imagined it to be a complaint proceeding from an affection of that organ—reſpecting the cauſe of this diſeaſe there have been a variety of opinions, we ſhall therefore proceed to the deſcription, and from thence

thence endeavour to point out what appears to be the moſt probable ſource.

DESCRIPTION. In this diſeaſe there are many ſymptoms obſervable which ſpare no part of the body; for the head, lungs, throat, belly, and many of its contained parts, and the extremities, have different appearances manifeſted in them, beſides more general affections of the whole machine.

With reſpect to the head, there is an oppreſſive pain, or ſenſe of heavineſs of the forehead, temples, and eyes, attended with an effuſion of tears—a torpor or dullneſs of the ſenſes and mind, accompanied with a diſreliſh of all things.

Afterwards, thoſe who are ſeized with the hyſteric diſeaſe have, for the moſt part, a very coſtive ſtate of bowels, a ſtrong propenſity to make water, which they do in large quantities, and then it is clear like water—and this SYDENHAM conſiders as a certain ſymptom—they have alſo a ſuppreſſion of breathing, and at the ſame time a languor of the whole body.

After this, great weight and pain are felt in the loins, and alſo coldneſs ſucceeds—the belly is hard and inflated—afterwards the navel is retracted, or drawn inwards towards the back, and then a certain kind of globe, or ball, is perceived to aſcend from the lower part of the belly—by and by the heart begins to be affected with palpitation, and the pulſe is irregular and hard, ſometimes intermittent—the extremities grow cold—there is a ſenſe of ſtraitneſs in the throat, as if the patient was ſtrangled with a rope—the face becomes pale—the breathing very difficult—the voice

fails—and the beating of the arteries are ſcarce any longer perceptible—but ſo great is the ſtricture of the belly, that neither any wind can be tranſmitted, nor a glyſter—ſometimes there is a vomiting of extremely ſour materials, or green bile.

In ſome, ſo great is the violence of this complaint, that the head and limbs are ſeized with ſtrong convulſive motions—the trunk of the body is wreathed too and fro—and commonly the hands are clinched, and with one the patient beats violently upon the breaſt—ſometimes though the hands continue open—others fall into a ſound ſleep, and lay without ſenſe or motion—in ſome the face and neck are inflamed with blood, look red, and the arteries beat ſtrongly.

Some fall into immoderate fits of laughter, or of crying, which now and then alternate with each other very quickly; and, when the voice is reſtored, talk incoherently, have falſe ideas, and whimſical imaginations, and ſome degree of delirium.

However, though this is the general mode of proceeding, we muſt not expect to meet with all theſe ſymptoms in the ſame perſon; for the fits are varied in different people, and even in the ſame perſon at different times, both with reſpect to the numbers of ſymptoms, their degrees of violence, and length of time the fit continues—but whenever it remits, and begins to be mild, which often happens in a certain period of time, then the pulſe, which was before weak and languid, and ſcarce perceptible, becomes more vigorous and ſofter—heat returns into the extreme parts—the face contracted and pale in common, becomes full and more

red

red—the noiſe of wind is heard through the ſuperior parts—and rumbling ſounds ariſe in the belly—and at laſt, as if waking from a profound ſleep, the patients regain their voice, ſenſe and motion, but complain of a heavy pain of the head, languor, and dullneſs of the whole body, legs, and feet.

Now it appears wonderful, that often in a very ſhort time theſe violent ſymptoms, which threaten almoſt inſtant death, ſhould intermit and ceaſe, ſo that the perſon who the day before appeared as if dying, ſhould now ſeem to enjoy perfect health.

CAUSES. From what has been above advanced, whether we advert to the nature of the ſymptoms themſelves, the mode of attack which in ſome caſes is ſudden, the appearances of recovery, or the ſtate of the machine immediately afterwards, we ſcarce can heſitate to pronounce this diſeaſe ariſing from ſtrong nervous affections, owing to the great incitability (18.) of that ſyſtem.

And as even thoſe authors who attribute the cauſe to the womb do allow that it attacks even men, though much more rarely than women, we cannot ſuppoſe that it is to be attributed ſolely to the morbid affections of the womb, though this may be one of the principal ſources in the more delicate ſex--we therefore conclude, that the conſtitutions ſubject to this malady have, for the predisposing cauſe, great incitability of the nervous ſyſtem, either from their birth, or created by ſome accidental circumſtances occaſioned in the habit from other diſeaſes, indiſcretion, or ſomething of this nature; and that, as it is united with a greater or leſs degree of vaſcular

cular irritability, (18.) in the whole, or ſome peculiar part of the conſtitution, ſo will the effect be different in different conſtitutions, or in the ſame conſtitutions at different periods—and as the brain has a general communication and connexion with every active part of the body, however minute, by means of the ſpinal marrow and nerves ;—and as it does act, and can be acted upon, ſo as to produce general affections either from itſelf, or from other parts which are primarily affected—and as its connexion with the viſcera is extremely great, particularly with the ſtomach, bowels, womb, and genitals—and it is alſo liable to have its powers exerted by mental affections, we conclude, that the hyſteric diſeaſe may be occaſioned by primary affections of the brain, and different cauſes exiſting in different parts, and have a variety of its ſymptoms dependent upon ſympathy. (69.)

We would therefore ſay, that the hyſteric diſeaſe is a nervous affection, ariſing from too great incitability of that ſyſtem, attended with different degrees of irritability of the vaſcular ſyſtem and muſcular fibres, occaſioned by ſome things inherent in the viſcera, or genitals, or from ſtrong mental action, having for its

CHARACTERISTIC SIGNS, a rumbling noiſe in the abdomen—a ſenſe of a globe or ball rolling about there, aſcending to the ſtomach and ſuperior parts of the throat, and producing an affection imitative of ſtrangulation—profound ſleep—convulſions—a profuſe and copious diſcharge of limpid urine—and the mind not ſpontaneouſly various and mutable.

This

This complaint is liable to be brought on by various cauſes—from a retention or copious flux of the menſes—from too great evacuations, whether by bleeding, vomiting, purging, or abſtinence—from the whites being conſiderable, or of too long ſtanding—from the neglect of accuſtomary evacuations—ſedentary life—obſtructed viſcera—from viſcid, acid, flatulent diet—from defect of the ſtomach—from too great ſalaciouſneſs—or from too ſtrong and painful mental affections.

CURE. The indications of which conſiſt in taking off the convulſive and ſpaſmodic affections, and allaying the incitability and irritability of the nervous ſyſtem and muſcular fibres.

In order to mitigate the violence of the fit, fœtid and volatile ſubſtances ſhould be applied to the noſe, ſuch as tincture of aſafœtida, ſpirit of hartſhorn---æther alſo is ſerviceable, and rubbing the temples and noſtrils with vinegar—the ſmoke of burning feathers applied to the noſe is eſteemed an efficacious remedy; for by theſe means women oppreſſed with deep ſleep, and lying as if apparently dying, have recovered, and ſoon returned to themſelves.

In women with child being thus ſeized, a compreſſion made with a roller at the lower part of the belly has afforded ſpeedy relief—and as patients ſubject to this diſeaſe are apt to be coſtive, glyſters made of rue, wormwood, or chamomile flowers in decoction, in which is diſſolved a ſpoonful of ſalt, ſhould be given; or if there is a difficulty in paſſing, pure expreſſed oil may be adminiſtered in the ſame mode.

During

During the fit, or on its near approach, or in the intervals, antiſpaſmodics may be had recourſe to, a variety of which have been recommended by different authors, as *valerian*, *caſtor*, *camphor*, *ſpirit of vitriolic æther*, *aſafœtida*, *muſk*, *animal oil*, (228, 229, 230.) and *opium*, (233.) theſe may be given in different forms, agreeable to the wiſh, or the particular ſtate of the patient, in which they are to be adminiſtered—in the fit liquid forms are only admiſſible—and here I muſt obſerve, that where the fœtids have been inefficacious, I have found the odoriferous anſwer—of the ſtrong ſmelling fœtids, I give aſafœtida, (No. 68. 181.) with the valerian julep, (No. 32, 33.) or camphor, (No. 69.)—of the ſweets, I prefer muſk, (No. 31, with 32. 34.)---but of theſe, according to the exigencies of the caſe, ſo do I proportion the doſe.

But as opium is conſidered one of the moſt powerful antiſpaſmodics in many diſeaſes, and acts by exerting its ſedative power, it muſt be obſerved, that when the diſeaſe depends upon the fullneſs of the habit, and requires bleeding, opium is likely to be pernicious, by promoting accumulation in the ſyſtem, and weakening the circulatory power of the veſſels---but where there is no fullneſs or inflammatory ſtate, and the diſeaſe ſeems to depend on irritation and increaſed incitability, perhaps it may be the moſt effectual remedy.

Notwithſtanding this opinion is ſupported by very great authority, I cannot avoid giving, in many caſes, muſk the preference, particularly if there is any torpor in the vaſcular ſyſtem or muſcular fibres, which we ſhall explain more fully when we ſpeak on the hypochondriac

chondriac diſeaſe; but then it ſhould be adminiſtered in tolerably large doſes, from ten grains to half a dram and upwards—moderate frictions about the pit of the ſtomach, and on the feet, are beneficial.

SYDENHAM, who has paid great attention to this diſorder, ſays, that it comprehends two thirds of the chronic affections afflicting mankind, adviſes *bleeding* and *purging*—and this he ſpeaks of generally---here I muſt beg leave to diſſent; for without the conſtitution is loaded with blood too much, they do infinite diſſervice ---there are few who can ſtand either the one or the other without manifeſt ſigns of an increaſe in their diſorder---hence, when either are neceſſary, except in caſes where the fullneſs of the veſſels is very conſiderable, cupping and mild aperients are preferable; and, if required, they may be repeated, but with the greateſt circumſpection; for bleeding and purging in any other mode empties the veſſels ſuddenly, and too copiouſly, weakens the ſyſtem too powerfully, and univerſally aggravates the ſymptoms.

Indeed, ſome hyſteric patients cannot bear the mildeſt purgatives, not even glyſters, without experiencing great inconveniencies, having their ſpirits immediately depreſſed upon any common evacuations downwards. I have often ſeen hyſteric fits ſucceed after two or three looſe ſtools.

After the fit is got over, we muſt next endeavour to prevent its return, by alleviating the incitability of the ſyſtem, and this is done by giving ſtrength and firmneſs to the conſtitution, as in other nervous caſes, for which many remedies have been adviſed, as *miſletoe*

of

of the oak, leaves of the orange tree, Peruvian bark, bitters, with preparations of iron, arſenic, mercury, and ammoniacal copper---of the three latter I cannot ſay any thing in this diſeaſe; but in very obſtinate caſes a trial of them has been recommended—of the two firſt, they appear not ſo effectual as the bark, bitters, and iron---of ſeveral which we have here ſet down; ſee the account. (665.)

With reſpect to the bark, a ſcruple or two taken night and morning has been ſaid to produce conſiderable benefit; where habits were delicate and relaxed, without any fullneſs and inflammatory tendency, and free from viſceral obſtructions, perhaps it may---but under theſe particular circumſtances I conſider it detrimental, which concluſion I draw from experience.

Preparations of iron united with bitters I have generally found moſt effectual---the effects of the former, and its moſt eligible preparations, are pointed out, (p. 357, 358.) and the different formulæ of ſteel and bitters may be found, (p. 369.)---and to the draught, (No. 63.) it is uſeful to add about thirty drops of ſpirits of vitriolic æther—the body ſhould be kept open by moderate doſes of ſome aloetic pill—but in all caſes it is neceſſary to take care that there is no ſanguinary fullneſs or inflammatory tendency in the habit.

Where the conſtitution appears to be of that nature, the fullneſs ſhould be kept under by moderate living, gentle exerciſe, particularly on horſeback --and, as having too often recourſe to bleeding is apt to occaſion an increaſe of blood afterwards, in order to keep the ſolids and fluids in a healthful ſtate, with reſpect to

their

their influence one upon the other, ſetons or iſſues are proper.

It is alſo neceſſary to attend to the alleviation of the patient's mind, adviſing change of ſcene, cheerful company, and the avoidance of ſuch things as raiſe ſudden commotion of the ſpirits, or depreſſion---a clear country air is highly beneficial, and all ſuch things as aſſiſt in keeping up the proper tone of the ſyſtem.

§ 6. HYPOCHONDRIAC DISEASE—HYPOCHONDRIASIS.

from the Greek *upo*, ſub, under, and *kartilago*, cartilage, from producing its effects, and exerciſing its violence under the cartilage called enſiformis, (39.) chiefly, and alſo under the lower rib of each ſide the cheſt, called hypochondres.

DESCRIPTION. As in the hyſteric, ſo in the hypochondriac diſeaſe *there is no part of the body, no function, which may not be injured in this of long continuance, and be eſteemed præternatural*, and the ſymptoms ſo violent and ſo numerous, that the whole ſcarce comes within the power of deſcription---hence, as fever is a diſeaſe which may be conſidered amongſt the acute caſes the moſt univerſal, *ſo amongſt the chronic may be the hypochondriaſis.*

In the beginning, a violent tenſion of the ſtomach and bowels are perceived, and flatulent inflations under the ſhort, or ſpurious ribs, particularly on the left ſide—there are alſo nauſea—loathing of food—and an uncertain appetite, ſometimes totally gone, ſometimes

voracious—the food taken is digeſted with difficulty —ſour and viſcid crudities are generated—an oppreſſive weight and pain in the ſtomach, particularly ſucceeding eating—*ſpaſmodic conſtriction of the throat, with frequent rejection of a clear mucus from the mouth*---difficulty of ſwallowing—heat of the ſtomach—ſour belchings—frequent efforts to vomit, and ſometimes vomiting itſelf, wherein materials ſo acrid are rejected, that the teeth have had a kind of ſtupefactive ſenſation, vulgarly called "*ſetting on edge*," and with which cloths have been not unfrequently corroded—indeed, vomiting of fatty materials have been obſerved—beſides, in the tract of the inteſtines, acute, pricking, or ſharply darting pains are perceived about the navel—ſometimes the bowels are very lax, ſometimes moſt obſtinately coſtive, with a retention of wind, which paſſes either upwards or downwards, and alleviates in a ſlight degree the other affections; but by and by returns with greater violence; though, on the contrary, they are oftentimes ſeized with frequent efforts of going to ſtool, and tubercles, or what are ſtiled the blind piles, (634.) beſet the anus, (46.) alſo bleeding ones ſometimes ſucceed—ſometimes the patients make water with difficulty and pain—the urine itſelf thin, dilute, and pale, ſometimes with a large ſediment, and that gritty.

Nor is the belly the only part experiencing ſevere diſtreſs, others alſo ſuffer by conſent or ſympathy, (69.)---the head is much affected, in whoſe external parts, thoſe called CEPHALALGIA HEMICRANIA, (549.) and various dragging pains, joined with immobility,

are perceived, and that known amongſt medical men by the name of CLAVUS, from clavus, a nail, a fixed pain, not exceeding the breadth of one's thumb—in the interior, giddineſs—ringing of the ears—with a difficulty of hearing, manifeſt themſelves—a dimneſs of ſight—ſometimes double viſion affects the patient—the eyes become painful, with dryneſs—and very often in a certain ſpace a burning and very troubleſome pain ſeizes the tongue---and the ſaliva flows ſo very copiouſly, that hypochondriacs are called SPUTATORES. (242.)

At length the animal functions begin to fail---the mind rouzed by no cauſe, at leaſt by that which is extremely ſlight, to inquietude, anxiety, ſorrow, anger, fear—becomes incompetent—inclines to vain and perverſe imaginations—the power of memory dies away, and reaſon fails—ſleep is diſturbed, turbulent, and replete with terror—in the breaſt great ſtraitneſs, conſtrictions—violent difficulty of breathing, joined ſometimes with fullneſs of the cheſt—tremblings and palpitations of the heart occur.

Now, from theſe ſymptoms, it appears very obvious, that this diſeaſe is a nervous affection like the former, though we conſider this to be ſomewhat different, and to depend more upon a torpidity of the nervous ſyſtem, than too great an incitability; and have the local incitability manifeſted in different parts, brought on from the continuance of the complaint.

For we muſt obſerve, in its commencement the ſigns of great torpor only make their appearance—beſides, the diſeaſe ſeldom appears early in life, *and more*

uſually in thoſe advanced in years only, and is apt to attack thoſe who lead indolent and ſedentary lives, are much addicted to ſtudy, and deep thinking, and oppreſſed with thoſe particular mental affections I have called ſaturnine, (107.) for theſe are apt to weaken and blunt the active powers of the conſtitution, render the circulation and nervous influence weak and ſluggiſh—and, indeed, ſome medical writers have almoſt wholly attributed this diſeaſe to a ſtate of mental affection. Beſides, their ſymptoms in winter, autumn, or any cold weather, are always more violent—but, on the contrary, in warm, and in the ſummer ſeaſon, hypochondriacs are more alert and vigorous; and in women afflicted with this diſeaſe, it is always increaſed at the time their menſes ought to flow; for they, for the moſt part, labour under ſome defect in this point—add to this, hypochondriacs can very rarely be affected with continued, epidemic, or infectious fevers—to the plague though they are liable—ſtill remain free from many other diſeaſes which reign at particular times; for, from the torpid ſtate of the nervous ſyſtem, the nerves become incapable of feeling the effects of the morbid particles which get into the habit, and therefore theſe particles are permitted to paſs through the machine without creating any diſturbance—the ſame happens to melancholic, but not to hyſteric people.

CAUSES. The *remote* or *inducing* are, beſides thoſe ſpecified above, too long continued watching—hard drinking—irregular diet—natural prediſpoſition—or whatever may give riſe to nervous diſorders in general in ſuch conſtitutions.

CHARAC-

CHARACTERISTIC SIGNS. An affection ariſing from too torpid a ſtate of the nervous, and want of proper irritability in the vaſcular ſyſtem, attended with languor, ſadneſs, and fear from inadequate cauſes, affections of the bowels and ſtomach, and mental deſpondency.

CURE. Our remedies muſt be of two kinds, corporeal and mental; for our indications are, to remove the affections of the ſtomach and bowels, increaſe nervous incitability, and vaſcular irritability, and properly regulate the laſt, and alleviate the diſtreſs and uneaſineſs of the mind.

As little can be expected towards performing a radical cure, when the diſeaſe is once fixed, as it very often originates from the very formation of the conſtitution, and depends ſo much on the ſtate of the mind, we muſt attend to ſuch things as will alleviate bodily diſtreſs, ſo that no imperfection in any part of the machine ſhall contribute to increaſe the uneaſy ſymptoms.

It is therefore firſt adviſeable to unload the inteſtines, with a glyſter, or ſome aloetic medicine, (No. 108.)—after having procured two or three copious evacuations, then let the ſtomach be cleared with a vomit, (No. 11, 12.) either will anſwer the purpoſe, or white vitriol, (259.)—if acidities prevail in the ſtomach, they ſhould be corrected with alkaline ſalts, (297.) chalk, &c. (296.) (No. 42, 43.) particularly calcined magneſia, or ſpirit of ſal ammoniac with quicklime, as they unite with acid, without fermentation and creating any wind; and in this caſe aceſcent vegetables, (294.) ſhould be avoided—though leavened bread

and vinegar may be taken with animal food, as the leaſt prejudicial; for ſolely it could not be perſiſted in, without contributing to corrupt the ſtate of the blood, (99.)—teſtaceous animals, or ſhell-fiſh, (273.) are proper viands with this intent—if we want to contribute to keep the body open by abſorbents, the vegetable alkali, (297.) or magneſia, muſt be employed—if that is unneceſſary, or a check is to be given to any evacuation of the bowels by theſe means, chalk, crabs eyes, or other ſimilar abſorbents, (296.) or the volatile alkali, (297.) muſt be exhibited—not any of which though muſt be employed in ſuch quantities as totally to deſtroy the acid neceſſary for the compoſition of animal fluids for the purpoſe of nouriſhment.

In caſes of coſtiveneſs, we ſhould confine ourſelves to ſmall doſes of the aloetic pill occaſionally, (No. 108.) ſuch as will gently keep the body open; for theſe after the operation, are not apt to leave the body in a coſtive ſtate—rhubarb, therefore, ſhould be avoided, and the common ſaline purgatives joined with antimonials—after theſe things are effected, we muſt conſider what are likely to prevent a return of the ſymptoms.

Should the ſtomach be relaxed, as is ſometimes the caſe, though not always, we muſt endeavour to give it increaſe of power, by invigorating and ſtrengthening applications, as the vitriolic acid, or that of ſea ſalt—alſo tar water, fixed ſal ammoniac, or water of acetated ammonia; theſe are ſaid to ſtimulate the ſtomach, and often increaſe the appetite—in this diſeaſe the fixed ammoniacal ſalt has been of ſingular efficacy, by

the

the daily uſe of it in doſes, juſt what would render the bowels lax—after taking it ſix, eight, or twelve months, the cold bath has completed the cure—aromatics, as cinnamon, ginger, pepper, nutmegs, cloves, and other ſubſtances poſſeſſed of certain degrees of pungency; theſe are extremely uſeful, particularly if the ſtomach is very torpid, or much relaxed—they fit that organ for feeling the effects of tonic medicines, as well as increaſe its temporary action—on which account, volatile ſalts of hartſhorn, or ammonia prepared, are well calculated, and with tonics are very properly conjoined—bitters alſo are very uſeful, as quaſſia wood, columbo, orange-peel, gentian, chamomile, &c. and their preparations, either in infuſion, tincture, powder, or extract—but we muſt not perſiſt in the uſe of any of theſe too long, leſt they ſhould hurt the tone of the ſtomach by their long continuance, which they are apt to do.

Bitters and aſtringents united are ſaid to have more efficacy than either ſeparately—bark, therefore, as poſſeſſing theſe properties, has been highly extolled; but the ſame caution is here neceſſary, for the ſame reaſons.

The beſt remedy for producing the deſired purpoſe in this caſe, and what may be continued the longeſt with the greateſt ſafety, is iron, and its preparations—the ſteel waters have been recommended, and often proved ſucceſsful—but on theſe Dr. CULLEN makes, though a minute, a very judicious remark, and ſays, though in the hypochondriac diſeaſe chalybeate waters

have ſometimes been apparently efficacious, he imputes it more to the amuſement and exerciſe accompanying the drinking them at the fountain-head, rather than to the tonic power of the ſmall quantity of iron they maintain—perhaps the elementary water favouring the excretions may have a ſhare in alleviating the diſeaſe—and it is for the ſame reaſon, probably, that theſe people are relieved more by drinking tea and coffee than thoſe who labour merely under indigeſtion, and alſo why the warm bath is preferred to the cold in the former caſe, and in the latter prohibited.

If the mind is haraſſed, or in pain, and flatulence, attended with head-ach, a ſlight opiate, joined with a cordial volatile draught, may be given, as from five to ten drops of tincture of opium, with five or ſix grains of ſalt of hartſhorn, in a little peppermint water, may be given; but opiates ſhould be very ſparingly uſed—in ſpaſmodic affections they may be uſed alſo in the ſame manner, coupled with aſafœtida or muſk—if the pulſe ſhould be quick, and there ſhould be a perceptible feveriſhneſs, aromatics and ſteel muſt be omitted, and exchanged for bark and the vitriolic acid.

We ſhould be particularly careful that the patient ſhould be thrown into ſuch ſituations, as to keep his mind in a ſtate of cheerfulneſs, in order to its being drawn from thoſe unpleaſant reflections by which it is diſturbed, particularly ſuch as lead him to brood over what he conſiders an irremediable calamity, his ill ſtate of health—leſſons of philoſophy and reaſon are of little

uſe,

uſe, if any, it is momentary; for the firſt eructation or pain, however trifling, overturns the ſtrongeſt arguments that can have been advanced, and he reverts back to his uſual deſpondency—nor can patients of this ſort bear raillery, not any thing is to them ſo offenſive, they conſider it either as ignorance, or the want of humanity, and will form moſt unconquerable diſlikes to thoſe who uſe it.

Cheerful company will be found always beneficial, and any exerciſe in the open air that requires dexterity, for theſe amuſe the mind—as to exerciſe, riding on horſeback, or driving a carriage, is the moſt eligible; but, if it can be afforded, taking a long journey, or going from one watering place to another, claims the preference; for variety of objects are perpetually engaging the attention, few of ſettled diſguſt are preſenting themſelves; and conſtant exerciſe employs a good deal of his time, and ſteals him as it were from himſelf; and by theſe means he will lead at leaſt a life of comfortable ſatisfaction, fancying the whole good he has derived from change of air, which will encourage him in the purſuit; in fine, whatever is directed to him ſhould be capable of furniſhing amuſement, and never carried to exceſs; for fatigue of every ſort is extremely detrimental—his diet ſhould be light, ſit eaſy on the ſtomach, agreeable to the palate, cordial, nouriſhing, and eaſy of digeſtion---animal food is in general the moſt proper---and his drink ſhould be ſpirits, which he likes beſt, lowered with water.

I have, in the courſe of practice, met with ſome caſes extremely perplexing, where ſymptoms declaratory

claratory of both hyſteric and hypochondriac affections manifeſted themſelves---hence I have ventured to call it the

§ 7. HYSTERIA-HYPOCHONDRIAC DISEASE,

as participating both of one and the other, which, as it has occurred to me, I ſhall take the liberty to deſcribe.

DESCRIPTION. In this complaint patients chiefly complain of heavy, uneaſy pains in the head, ſometimes fugitive and acute—a dimneſs of ſight; but this temporary—a ſenſe of ſtrangulation—ringing in the ears, and quickneſs of hearing—ſudden ſtarting at any ſlight noiſe, on the opening of a door quickly, or any thing falling in the room—ſometimes they have complained of a coldneſs of the head, particularly the back part, as if water was trickling down it—flatulence of the ſtomach and bowels—ſometimes they are coſtive, now and then otherwiſe—urine is made frequently, in ſmall quantity, then becomes turbid; at other times more copious, and of an amber colour, ſeldom or never purely limpid—they oftentimes complain of an itching, tingling, or pricking in the ſkin, eſpecially if a gentle ſweat is promoted—ſometimes an eruption like the nettle-raſh ſhews itſelf—frequently a general tumefaction, of a puffy aſpect, without any ſpots—at others very ſmall veſicular eruptions at the tips of the fingers; and all theſe external appearances are, for the moſt part, attended with great heat, itching, or a ſenſe of pricking—the appetite is very irregular—the mind eaſily diſturbed, and generally brooding

ing over ſome perſonal calamity, chiefly imaginary—the circulation ſluggiſh and languid—the pulſe ſlow—and the extremities, for the moſt part, cold.

CAUSES. Theſe appearances I always ſuſpect from ſome acrimony ſubſiſting in the fluids, and thus far practice has confirmed my opinion, enables me to reaſon on theſe appearances, and reconcile them to the doctrines laid down.

For the incitability of the nervous ſyſtem ſeems to have been kept up by the ſtimulus of the acrimonious humours, which was not ſufficiently powerful to increaſe properly the action of the vaſcular ſyſtem—hence the internal parts would be loaded, and the acrid particles have a power of exerting their ſtimulus in proportion to the quantity retained—beſides, from the torpid ſtate of the circulation, the acrimony would be greatly increaſed by the retention of ſuch materials as ſhould naturally have been thrown out of the habit; and this I am warranted to aſſert from what occurred on any eruption appearing on the ſkin, or hot tumefaction of the extremities, or by a gentle ſweat being promoted; for at that time the patients were more conſiderably relieved.

CHARACTERISTIC SIGNS. Quick nervous incitability, united with ſtrong mental prepoſſeſſion, and perſuaſion of the patient's own miſery, and fatality of their ſituation, with torpor of the vaſcular ſyſtem.

CURE. The indications are, to render the nervous influence more equable, and take off the vaſcular torpidity; and theſe are chiefly accompliſhed by cordials, aromatics, and *ſtimulating* antiſpaſmodics, by promoting

promoting a determination of the fluids to the ſurface.

But, notwithſtanding gentle perſpiration is ſo ſingularly uſeful, for this purpoſe antimonials muſt not be exhibited, nor muſt opiates for alleviating ſpaſmodic affections, for they very often do infinite miſchief, by relaxing the ſtomach, and increaſing the torpor of the ſyſtem—ſtimulants are better, and ſtill more the ſtimulating antiſpaſmodics; ſuch as volatile alkali, aſafœtida, muſk, given occaſionally, and the volatile ſaline mixture intermediately, joined with cordials, inſtead of the Polychreſt ſalt, (No. 126.)—(of theſe ſee the different formulæ, from page 361 to 365.)—and I have often found the ſpirit of vitriolic æther and camphor anſwer every good purpoſe we could expect from opium, without producing its diſagreeable conſequences—the warm bath in theſe caſes is beneficial.

Though it is neceſſary to have the body kept open, ſtrong purging always does harm—occaſionally the aloetic pill, (No. 108.) with or without the calomel, may be given—and as for bleeding, we ſhould rarely, if ever, have recourſe to it—if it is ever thought neceſſary, cupping is the beſt mode—perhaps topical bleeding with leeches may now and then be uſeful in fixed local complaints of the head, or other parts where ſevere pain gives much uneaſineſs; but, in order to keep off an increaſe of blood, I ſhould recommend ſetons or iſſues—riding on horſeback, and that *conſtantly perſevered in*, is amongſt the moſt certain remedies—and bitters, with preparations of iron, or in ſome caſes without them, generally muſt cloſe the cure—

the

the Bath waters are extremely uſeful—and, when patients have recovered ſtrength to bear the cold bath, that may be had recourſe to; but care muſt be taken to proportion the coldneſs of the water to the power of the conſtitution, for baths too cold are highly injurious---indeed in our medical conduct great nicety is required in theſe complicated caſes, in which we muſt obſerve, that the remedies recommended in the hyſteric and hypochondriac diſeaſe muſt be ſelected, as the complaint verges more to one than the other---upon the whole, I found antiſpaſmodics and ſtimulants to be the moſt efficacious auxiliaries; the former when hyſteric, the latter when hypochondriac ſymptoms were the moſt predominant; in which laſt they may be freely uſed; for it is aſtoniſhing in how large doſes ſtimulants may be given without injury, and how very neceſſary they are to produce any good effect.

§ 8. Indigestion, called Dyspepsia,

from the Greek words *dys*, difficulter, and *pepſis*, concoctio, digeſtion.---If we conſider what has been ſaid of the ſtomach, and its nature, (38, &c.) it will obviouſly appear, that it is liable to a variety of complaints, ſuch as inflammation, abſceſs, ulcer, ſcirrhoſity of the lower orifice of the ſtomach, and a variety of others---indigeſtion is then ſaid only to be conſidered as a ſymptom---indeed, it may always properly be conſidered in this light; for where there is a defect in any of the digeſtive powers, (ſee page 95.) this complaint occurs—and if we conſider what has been advanced, when ſpeaking of pains of the ſtomach, the hyſteric,

hyſteric, and hypochondriac diſeaſe, we may form a tolerable certain opinion of its cauſe, which generally proceeds from a WEAKNESS AND RELAXATION OF THE STOMACH AND BOWELS, and which cauſe we muſt conſider in this place.

DESCRIPTION. Under this circumſtance, there is a want of appetite—nauſea—vomiting | flatulent diſtenſion of the ſtomach, with eructations either ſour, rancid, or ſome other, agreeable to the nature of the imperfectly digeſted, or indigeſtible materials contained in the ſtomach—cardialgia, or heart-burn, (560.)—pain alſo in the ſtomach, attended, for the moſt part, with a coſtive habit—this diſeaſe will alſo very often produce the ſick head-ach, as proved by experience. Dr. FOTHERGILL ſays, "from numerous "circumſtances it is moſt clear, that this head-ach "proceeds from the ſtomach, not the reverſe, as has "been the opinion of thoſe who have been ſufferers "by it."

CAUSES. The *remote* or *inducing* are, too frequent overloading the ſtomach—living upon leguminous and flatulent diet—ſedentary life—too violent evacuations, particularly of blood—taking too frequently ſtrong purging medicines—dyſentery—miſcarriages—intermittents—and ſpaſmodic affections of the ſtomach and bowels. The *proximate* or *immediate* have been ſpecified above.

CURE. The indications are, to invigorate the tone of the ſtomach, and, where wanting, to increaſe the heat---the mode of doing which have, in a great meaſure, been ſet down when treating of pain of the ſtomach

ſtomach from indigeſtion, (561, &c.) and the hypochondriac diſeaſe, (821, &c.) to which we ſhall only beg leave to add, that cold liquids ſhould be drank in preference to thoſe which are warm, without actual warmth is neceſſary on account of the too great coldneſs of the ſtomach, and then, inſtead of tea and coffee, infuſion of roſe leaves, ſage, roſemary, or mint, may be uſed—and the preference ſhould be given to the cold bath.

If meat cannot be contained on the ſtomach, as will ſometimes be the caſe, cupping-glaſſes may be applied about two inches below the ſtomach, ſtimulating cataplaſms, or plaiſters, applied at the pit of the ſtomach —generous, rough wine ſhould be drank cold.

The mode of living ſhould be careſully attended to, elſe all means will prove ineffectual—all oily ſubſtances, butter, therefore, fat meats, and meat pies, all unfermented farinaceous food, malt liquors, particularly ale and porter, watery and vapid fruits, and raw vegetables, ſhould be avoided—chewing tobacco, or any thing which promotes too much the diſcharge of ſaliva—frequent inebriation are extremely pernicious, as alſo exceſs of venery, indolence, mental uneaſineſs, or too cloſe application to intenſe ſtudy or buſineſs—nor ſhould any exceſs be committed in eating, though the food ſhould be of the eaſily digeſtible kind, of which to the animal claſs patients ſhould chiefly adhere—cold, moiſt air, without exerciſe, is detrimental; but cold air with it is beneficial—food ſhould be taken often, and in ſmall quantities; but if patients will not adhere to this rule, they ſhould be confined to one kind for ſeveral days; and if vegetables muſt

be

be indulged in, thoſe which are the moſt tender, and ſtewed in their own juices, are the moſt proper.

If we now conſider the effects produced in the habit by this complaint, we ſhall ſee that a vaſt variety of chronic diſeaſes owe to it their origin, and, therefore, on its very firſt appearance it ſhould be carefully attended to; for, if it is ſuffered to continue long, it is very rarely radically cured—and, indeed, I am perſuaded that a great number of thoſe complaints which affect children born of healthful parents, in their infantile ſtate, are produced from the ſame ſource, occaſioned too often by the indulgence of over-fond mothers, or the ignorance or indolence of nurſes, all which I think may be prevented by adhering to the rules laid down when treating of nurſing. With regard to their cure, ſimilar modes muſt be purſued as we have laid down in the diſeaſe juſt treated, appropriating the remedies to the circumſtances of the caſe, and the delicacy of the frames with which we have to deal.

§ 9. RICKETS—RACHITIS.

This Engliſh name ſeems to be a corruption of the word RACHITIS, probably from a ſuppoſition that this complaint derived its origin from ſome affection of the ſpine, as the Greek word *raxis*, from whence rachitis is derived, means ſpine.

Moſt phyſicians agree that it very ſeldom, or never, attacks before the ninth month after birth, and ſeldom comes on after two, ſome ſay ſix, years.

DESCRIP-

DESCRIPTION. In the beginning, the proportion of many parts of the body is irregular—the ſkin looſe—the belly thin, and as if turgid with wind—the muſcular fleſh waſtes away, but the hands, wriſts, arms, knees, and feet grow large—the bones afford but weak ſupport to the body, and are often accompanied with crookedneſs of the ſpine, from whence all their bodily actions and mode of moving on the ground are weak, which often terminates in weakneſs, unwillingneſs, and diſlike of motion—theſe children ſit ſluggiſhly in the arms of their nurſes, and feel heavy—at that time the arteries running up the neck appear full—the head is large, and nods from one ſide to the other, owing to the incapability of the neck ſuſtaining it erect, from the flaccidity of that part—their diſpoſitions are acute beyond their age, but the breaſt is narrow, and, as it were, compreſſed from its ſides with the ſternum acuminated, and the extremities of the ribs knotty.

As the malady increaſes, a ſlow fever comes on, with a cough, difficulty of breathing, and other ſymptoms, which, for the moſt part, continue till death cloſes the ſcene—but this is not always the caſe—a number of theſe ſymptoms we have had inſtances of continuing for a long ſeries of time, ſtill afterwards the diſeaſe ceaſes to advance, and health is reſtored, except ſome diſtortions of the limbs may remain. We ſhould have obſerved, that the opening at the top of the head, called fontanelle, and the parts where the bones join, named ſutures, keep longer open, and in a greater degree, than others in an healthful ſtate; and the forehead is apt to protuberate in an uncommon manner—

the children get their teeth ſlower, and much later than uſual, and thoſe which appear ſoon become black, grow looſe, and often fall out—the deſire for food, and the appetite itſelf, is often quick and good; but there is frequently a looſeneſs, or a ſtrong propenſity to it—and though ſometimes the diſpoſition is acute, we have ſaid, now and then the faculties of the mind are impaired, and dullneſs and ſtupidity are prevalent.

Theſe ſymptoms do not all of them prevail in every patient, but more or leſs of them according to the degrees of mildneſs or violence of the diſeaſe; in ſome thoſe which are more moderate, in others thoſe which are more ſevere, make their appearance.

On opening thoſe who have died of this complaint, in ſome the liver has been preternaturally large, ſcirrhous, and adhering to the midriff---the meſentery beſet with indurated glands, and obſtructed with the ſweatbread---in others, the lungs united to the pleura, or back, and they either livid, or loaded with abſceſſes, called vomicæ---in ſome the pericardium, the membrane ſurrounding the heart, ſurcharged with ſerum---but in common the brain has been found flaccid, replete in its ventricles with a thin watery fluid, and the fluids themſelves through the machine in a diſſolved ſtate---the muſcular parts preternaturally ſoft and tender, and the bones capable of being cut with a knife, particularly near the places of their union.

CAUSES. The *remote* or *inducing* are, bad nurſing---ſuckling children too long---an acid produced from the milk with which the child is fed for the firſt

nine

nine months, or feeding it on unfermented farinaceous ſubſtances, and indulging too much in their uſe, particularly ſuch aliments as poſſeſs too firm a texture, and are too viſcid and ſour, as bread not well fermented, cheeſe, cheeſe-cakes, garden fruits—giving children ſour wine—living in bad air, or low marſhy places—opiates too frequently and freely given—want of proper exerciſe—the habit weakened by preceding diſeaſes—a diſeaſed nurſe—and external violence.

The *proximate* or *immediate*, a torpid ſtate of the circulatory ſyſtem, and general flaccidity or relaxation of the ſolids preternaturally increaſed, by which the organs of digeſtion, aſſimilation, and nutrition, are defective in their power, and bring on a thin ſtate of fluids, and want of that matter in them which form the bones called offific.

CHARACTERISTIC SIGNS. A large head, ſwelling greatly on the fore part—tumefied knees and wriſts—depreſſed ribs—diſtended belly—the reſt of the body waſting away.

CURE. The indications are, to increaſe the tone of the ſtomach, improve the digeſtive powers, and invigorate the ſyſtem.

In the firſt place, however, ſome of the ſymptoms are to be alleviated, as the ſtomach and bowels are apt to be foul, at the ſame time the latter diſtended with wind; they ſhould be emptied by gentle vomits and mild purgatives—ſmall doſes of ipecacoanha, or of tartarized antimony, ſhould be given for the firſt intent; and for the other, rhubarb and calomel, or Polychreſt ſalt; rhubarb is the moſt eligible, as it is both bitter

and aſtringent, therefore a good ſtimulant and tonic—the vomit may now and then be repeated, as it will, by the ſhocks it gives to the bowels and the other viſcera of the belly, aſſiſt in taking off, or preventing the obſtruction and enlargement that often occur in them.

The belly alſo may be rubbed with ſtimulant liniments, as volatile liniment, or No. 182. which has been ſtrongly recommended—indeed, any of the joints which are ſwelled may be rubbed with this twice a day—and, perhaps, it will be more efficacious if it is applied after friction of the parts with a flannel before the fire—*ſcate oil* has alſo for this purpoſe been much extolled, which is uſed by the inhabitants of the weſtern parts of Scotland in the following manner:—firſt, the wriſts and ankles are rubbed well with the oil in the evening, this immediately raiſes febrile affections for ſeveral hours; when the fever ſubſides, the ſame parts are rubbed again the night following, and repeated as long as the rubbing excites ſimilar effects—when, by rubbing theſe parts alone, not any febrile affections can be excited, the ſame proceſs is performed, and continued in the ſame manner on the knees and elbows—then afterwards down the back bones, and on the ſides—and when no fever is raiſed by this operation, a flannel ſhirt dipped into the oil is put upon the patient's body, by which more violent febrile affections are raiſed than by any of the former unctions, and is continued till the cure is completed, which commonly happens in a ſhort time.

The chief tonics employed in theſe caſes are bark and ſteel—of the former, from the nauſeouſneſs of the

taſte, it is ſcarce poſſible to get down a ſufficient quantity to render it effectual—however, it may be applied externally to the wriſts, by forming the extract into plaiſter, or quilting the powder in ſoft linen, (404.) —applied in theſe modes I have been informed that it has proved effectual; but I ſhould prefer its being brought into contact with the coats of the ſtomach immediately, as on that, it appears to me, depends its greateſt efficacy.

Steel, as a preventive, has had its warm advocates, who, in order to be able to diſtinguiſh whether a child will become ricketty, point out the following ſymptoms:—a paleneſs and ſwelling of the countenance, and in that part of the cheeks, which ſhould be naturally red, a yellow colour approaching to that of ſulphur; in which caſe, five grains of the filings of iron, and as much rhubarb, with ten grains of ſugar, ſhould be given every morning faſting and evening—but ſhould this prove too purgative at firſt, one doſe ſhould only be given every day—after a month's continuance, a keen appetite enſues, quick digeſtion, and a copious flow of urine—the fullneſs of the face, and yellowneſs of the complexion, by degrees are removed, and the natural countenance and firmneſs of the body gradually reſtored—and this practice, it is ſaid, has never failed of ſucceſs in any one inſtance.

Five grains of ammoniacal iron may be given twice a day for a month, or longer, interpoſing occaſionally aperient doſes of rhubarb; but, in caſes of feveriſh diſpoſition, bark, with the vitriolic acid, is more eligible.

In caſes of rickets, prepared kali, (273.) half a dram diſſolved in eight ounces of bark decoction, four ounces taken every day cured a boy of ſeven years old, who was ſo much afflicted, that his inferior extremities had become ſtiff and immoveable—the body flaccid—he was much worn away by a looſeneſs and conſtant ſweatings, and had five fiſtulous ulcers all diſcharging at the ſame time—in the courſe of one month from beginning to take the medicines he roſe from his bed, and walked with ſome ſupport—the bark was then changed to madder, and in leſs than four months he walked with a crutch, and by that time the ulcers were nearly healed—the watery ſolutions of kali have in many ricketty people been ſucceſsful.

Strong beer, porter, and wine have been recommended; but I ſhould rather think them pernicious, the two former from their viſcidity, and the latter from its proneneſs to become acid.

But the remedy moſt to be depended upon is *cold bathing*, or *bathing in the ſea*, and is certainly the moſt powerful preventive. In Scotland it has long been the practice with people of all ranks to waſh their children from the time of their birth with cold water; and, from the time that they are a month old, the ſuperior claſs dip them entirely in cold water every morning—and, where this practice has been purſued, Dr. CULLEN aſſerts, that he never met with any inſtance of rickets—among the common people, though they waſh their children with cold water, they do not ſo commonly practiſe immerſion; and when amongſt theſe he meets with caſes of rickets, he preſcribes cold bathing,

bathing, which has accordingly checked the progreſs of the diſeaſe, and ſeems ſometimes entirely to have cured it.

With reſpect to diet, ſtrong objections have by ſome been ſtarted to milk, and where nurſes are apt to give large quantities of a thin watery kind, it may certainly be detrimental, becauſe it will weaken and relax the ſtomach, fill it and the bowels with ſour humours, and alſo the machine with too great a load of watery, ill-digeſted fluids, and hence favour the coming on of the rickets; but where the milk is of a proper conſiſtence, and does not appear to diſagree, it may be perſiſted in—chicken, or thin veal broth, beef-tea with rice, or rice with cow's milk, properly thinned, may be occaſionally given—and leavened bread is preferable to the unfermented farinaceous ſubſtances, of which thin panada may be made, and now and then mixed with ſmall portions of aromatic ſpices.

Teſtaceous powders, crabs eyes, &c. (296.) may be given by themſelves, or mixed with the food, as they are taſteleſs; for of theſe we have accounts of their utility.

Exerciſe in theſe caſes is eſſentially neceſſary; but it ſhould be of the gentler ſort, and in an horizontal poſition, leſt, by being kept upright, ſome diſtortion ſhould take place—here cradles may be of uſe, or mattreſſes laid upon ſwings, and judiciouſly contrived to ſecure the little infant from falling out, which ſhould be fixed in the open air, in ſome ſhady place, protected from the too powerful force of the ſun—nurſes ſhould avoid carrying children in this diſeaſe always

in one arm, (188.) nor ſhould they hoiſt, or toſs them up much, for the breaſt may by theſe means be greatly injured, by the preſſure of the thumb and finger on each ſide the breaſt bone, from indentation or bending of the ribs inwards.

And with reſpect to ſituation, as it has been obſerved, that people who live in damp moiſt places, where the air in common abounds too much with watery particles, are more ſubject to this diſeaſe than thoſe who live in dry airy ſituations, particularly in Holland, all ſuch ſhould be particularly avoided—and by obſerving the rules here laid down, we may be almoſt always ſucceſsful in preventing, and very often in curing this malady, if at the ſame time care is taken to preſerve cleanlineſs, which is not the leaſt uſeful rule in our conduct.

§ 10. HYDROPHOBIA;

ſo called from *udor*, aqua, water, and *phobeo*, timeo, to fear, or DREAD OF WATER—this is by no means a proper appellation—the term of Dr. MEAD is more characteriſtic, DUSCATAPOTIA, from *dys*, difficulter, difficultly, and *katapino*, deglutio, to ſwallow, a DIFFICULTY OF SWALLOWING; for it has been obſerved, that dogs, wolves, and foxes, in which animals this malady ariſes ſpontaneouſly, have, though they have been mad, lapped water, eat, ſwam over rivers, and run along the banks—however, as an incredible averſion to all liquids is *in general* the leading ſymptom, it has retained the former name—indeed, in men who have been bit by dogs or wolves afflicted with this malady,

lady, the principal ſymptom is an averſion not only to water, but alſo air and light, and they extremely rarely have any deſire of drinking. It has been differently divided by different authors—the beſt of which appear to be into that which ariſes from the bite of a mad animal, called therefore *hydrophobia rabida*, and that which comes on from ſome undiſcoverable or imperceptible ſource, ſtiled *ſpontanea*.

DESCRIPTION. It generally firſt diſcovers itſelf by the patient's becoming languid, dull, and reſtleſs, and having frightful dreams—ſuddenly the pains, for the moſt part, ſhoot from the place where the ſkin was lacerated, all along up to the throat, where it cauſes a ſenſation of ſuffocation, and a total inability of ſwallowing liquids—though there is not always a dread of them attendant, yet there have been inſtances where the noiſe of falling water could not be borne, it created ſuch violent agitation, much leſs the ſight.

Theſe ſpaſmodic affections of the throat, in the courſe of the diſeaſe, gradually diffuſe themſelves over the whole muſcular ſyſtem, ſimilar to what happens in tetanus, (656.)—nor is it uncommon to obſerve, in ſtrong conſtitutions, a priapiſm, or even a luſtful appetite, exerting itſelf with ſome degree of violence—ſhould the wound have been healed, it begins to be affected with pain, ſwells, inflames, and diſcharges a thin, ſharp fluid—this pain is conſidered a primary invariable mark of a beginning hydrophobia.

CAUSE of the firſt ſpecies, with which we oftenеſt meet, is the virus of the mad animal abſorbed into the habit affecting immediately the nervous ſyſtem—which

virus

virus may lurk inactive in the conſtitution for fourteen, twenty-one, or forty days, within which time it begins to exert its influence; and it is obſerved to do that the ſooner, in proportion as the bite is nearer to the glands, (12.) of the upper part of the throat and mouth, called ſalival.

CURE. The indications are, to endeavour to ward off the ſpaſmodic ſymptoms, as in tetanus, (656.) and throw the offending poiſon out of the habit.

For which purpoſes we apply and depend upon large doſes of opium given every three or four hours —muſk alſo may be given liberally—plaiſters of opium applied to the throat, and liniments of tincture of opium and camphor—ſponges dipt in hot vinegar ſhould be put to the mouth and noſtrils, that the fauces may be kept perpetually moiſtened by its ſteams, —nor ſhould the uſe of the warm bath be omitted.

Towards the cloſe of the cure, opium may be advantageouſly joined with cinnabar, muſk, camphor, and aſafœtida—opiate glyſters ſhould frequently be thrown into the inteſtines; in fine, it ſhould be applied to every place, and by every means, as expeditiouſly as poſſible, in hopes of allaying the violence of that highly increaſed degree of nervous incitability and muſcular ſenſation—and, in order to procure an expulſion of the poiſon out of the habit, mercurial ointment rubbed into the machine, that a ſalivation may be raiſed as ſoon as poſſible, and this continued for two or three weeks.

Oil has lately been recommended in this complaint, thrown into the habit by means of external frictions

all

all over the body, thrown into the inteſtines by way of glyſter, and given by the mouth, when patients can be prevailed upon to conform to the mode.—One caſe has lately occurred, where there was every reaſon to conclude that the patient was preſerved by this method—ſea and cold bathing, with the pulvis antilyſſus, (146.) have been greatly recommended in this diſeaſe, which have proved inſufficient.

Indeed, cold bathing appears to me, if not a dangerous, a doubtful experiment, and depends upon conſtitutional circumſtances ſolely for its utility, if it has any; for without perſpiration can be increaſed by its uſe, it certainly bids fair to confirm, rather than remove, the malady, by forcing the fluids too much upon the internal parts of the ſyſtem, in which caſe, ſhould the habit not be ſtrong enough to exert an expulſive force more than adequate to the impulſive power, the poiſon would be more riveted on the nervous ſyſtem, and humourous and ſanguinary congeſtions be added to the nervous affections—indeed, CELSUS himſelf ſeems to have been aware of this, or ſome other inconvenience, ariſing from the uſe of the cold bath; for he adviſes, as ſoon as the patient comes out, to be plunged into warm oil, and drink of generous wine, evidently to ſolicit and increaſe the motion of the fluids towards the external parts—in theſe caſes, therefore, the warm bath and frictions appear to be the moſt proper auxiliaries to the other remedies.

This diſeaſe is ſometimes ſucceeded by inflammatory ſymptoms, in which caſe we may have recourſe to bleeding.

After patients have gone through the proper courſe of the remedies herein adviſed, ſufficient to remove the cauſe, then cold or ſea bathing, adapted to the powers of the conſtitution, with the uſe of tonics and ſtimulants, may doubtleſs have its uſe, in order to give ſtrength and vigour to the ſyſtem, neceſſarily debilitated by evacuants and ſedatives.

The ſecond ſpecies ariſes without any contagion being communicated, in ſome fevers—from ſome preceding diſeaſes—from the acceſſion of an epilepſy—from the bite of an epileptic patient—by the bite from people in violent fits of rage, &c. according to the accounts of different authors—indeed, an inferior degree of it will be obſervable in ſome hyſteric caſes, where, from the difficulty of ſwallowing, patients are extremely fearful of taking liquids, nay, they cannot ſometimes be prevailed upon to make the attempt.

In all which caſes muſk and opium appear to be the remedies moſt rational, and productive of the greateſt efficacy.

When it ariſes from the bite of a mad animal, the preventive method laid down, (146.) ſhould be ſtrictly obſerved, which appears to be the beſt calculated to obviate the moſt dangerous, and too often fatal effects of this deſtructive malady—and with CHARACTERISTIC SIGNS of which it may be uſeful to cloſe the account; theſe are, a very high degree of nervous incitability, or ſuper-ſenſation, attended with a loathing, or dread of any liquid, from the difficulty of ſwallowing, creating a painful ſpaſmodic affection of the throat, for the moſt part occaſioned by the bite of a

mad

mad animal, and ſometimes, though leſs frequently, from other accidental or inherent cauſes.

FORMS OF MEDICINE.

No. 140. CINNABAR ELECTUARY.

Take Bark, } of each 1 ounce.
Valerian in powder, }
Cinnabar of Antimony, ½ an ounce.
Syrup of Saffron, ſufficient to form an Electuary.
DOSE. Two drams.

141. AMMONIACAL MIXTURE.

Take of Milk of Ammoniacum, 3 ounces.
Pennyroyal Water, 6 ounces.
Antimonial Wine, 40 drops.
Oxymel of Squills, ½ an ounce.
Compound Spirit of Lavender, 3 drams.
Mix.—DOSE. One ounce or one ounce and a half.

142. STIMULANT APERIENT PILLS.

Take Extract of Bitter Apple, } of each 20 grains.
Aloes, }
Flowers of Benzamin, }
Salt of Amber, }
Myrrh, }
Caſtor, } of each 30 grains.
Calomel prepared, }
Camphor, } of each 10 grains.
Salt of Hartſhorn, }
Balſam of Peru, ſufficient to form Pills.
DOSE. One dram.

143. AMMONIACAL MIXTURE.

Take Acetated Ammonia, 2 ounces.
Peppermint Water, 5 ounces.
In which diſſolve
Gum Ammoniacum, 1 dram.
then add Simple Oxymel 6 drams.
Mix.—

No. 144. Stimulating tonic Mixture.

Take Decoction of Bark,	1½ ounce.
Camphorated Tincture of Opium,	½ an ounce.
Tincture of Spaniſh Flies,	1 dram.

Mix.---

145. Foetid attenuant Mixture.

Take Gum Ammoniac, Aſafœtida,	of each 1 dram.
Pennyroyal Water,	7 ounces.
Syrup of Garlic,	½ an ounce.

Mix.—Dose. Two or three ſpoonfuls.

146. Purging Mixture.

Take Infuſion of Senna,	6 ounces.
Tincture of Aloes,	6 drams.
——— of Jalap,	3 drams.
Aromatic Tincture,	1½ dram.

Dose. One ounce and a half.

147. Cooling purging Draught.

Take Warm Water,	1½ ounce.
Acetated Kali,	1½ dram.
Honey,	2 drams.

Mix.—Given two or three times a day.

or---148.

Take Common Mint Water,	1½ ounce.
Tartarized Kali,	3 to 4 drams.
Syrup of roſes,	½ an ounce.
Compound Spirit of Lavender,	1 dram.

Mix.—To be given in the morning.

149. Dandelion Draught.

Take of the Leaves, Stalks, and Roots of Dandelion, well waſhed and bruiſed,	1 handful.
Raiſins,	½ an ounce.

Let theſe be boiled in one pint to half a pint of water, let it ſtand till cold, then ſtrain off the clear liquor, in two ounces of which

diſſolve Acetated Kali,	½ a dram.
and add Tincture of Senna,	½ an ounce or 6 drams
Compound Spirit of Lavender,	1 dram.

Mix.---

No. 150. Saponaceous Pills.

Take Venice Soap, 2 drams.
Rhubarb, 1 dram.
Syrup of Saffron, ſufficient to form thirty-ſix Pills.
Dose. Four.

151. Serous Purgative Powder.

Take Jalap in powder, } from 20 to 30 grains.
Purified Nitre, }
Mix.—

or---152.

Take Gamboge, from 12 to 20 grains.
Cryſtals of Tartar, ½ a dram.
Mix.—

153. Diuretic Electuary.

Take of the Ruſt of Iron prepared, { from 2 drams to ½ an ounce.
Powdered Squills, 1 dram.
Aromatic Powder, 1½ drams.
Conſerve of Roman Wormwood, 1½ ounce.
Syrup of Garlic, ſufficient to form an Electuary.
Dose. Quantity of a Nutmeg twice or thrice a day, with the following Draught:

154. Diuretic Draught.

Take of Diuretic Salt, from ½ to 1½ dram.
Diſtilled Water, 1½ ounce.
Horſeradiſh Water, 2 drams.
Mix.—

155. Deobstruent Pills.

Take Extract of Black Hellebore, } of each 2 drams.
Myrrh diſſolved, }
Powder of the Holy Thiſtle, 10 ſcruples.
Mix theſe well together, and let the maſs be expoſed to the dry air, until it is proper to form into pills, a grain and a half into a pill. Theſe pills have been given to the number of twenty or thirty to a doſe, dividing them into three equal portions, one portion to be given every hour.

No. 156. Medicated Wine or Beer.

Take of Gentian,
Lemon Peel,
Mint,
Juniper Berries, } of each 4 ounces.
Cinnamon, 2 ounces.
Ruſt of Iron, 1 ounce.

Infuſe theſe in a Gallon of Wine, or Ale, for fourteen days.

Dose. Of the Ale half a pint, of the wine three or four ounces.

157. Stimulating tonic Electuary.

Take of the Root of Wake Robin, freſh gathered, and well bruiſed,
Gum Arabic in powder, } of each ½ an ounce.
Bark, 5 or 6 drams.
Syrup of Saffron, ſufficient to form an Electuary.

Dose. The quantity of a Nutmeg—or the ingredients may be formed into powder or pills, and taken in that manner, properly proportioning the doſe of Wake Robin in powder of the dried root, that is, from five to ten grains at a doſe.

158. Camphorated Bolus.

Take of Mithridate, or Venice Treacle, } 20 grains.
Camphor, 8 grains.
Syrup of Saffron, ſufficient to form a bolus.

159. Decoction of Water-Dock.

Take of the Bark of the Root of Water-Dock, } ½ a pound.

Boil this in ſix pints of river or rain water to four, in which diſſolve two drams of Cryſtals of Tartar, and let half a pint be taken three or four times a day.

160. Kali Draught.

Take of Kali prepared, 15 grains.
Diſtilled Water, 1½ ounce.
Syrup of Sugar, 1 dram.

Let this be drank, and immediately afterwards let dilute vitriolic Acid, as much as will neutralize the Alkali, be taken in half an ounce of diſtilled Water.

161. Wort.

Take of Malt freſh ground, 1 pound.

Infuſe it in three pints of boiling Water, let it ſtand for four hours, and then pour off the clear liquor for uſe.

Dose. From two to four pints in a day.

No. 162. Hemlock Plaister with Ammoniacum.

Take of the Expreſſed Juice of Hemlock, 4 ounces.
Gum Ammoniacum, 8 ounces.
Vinegar of Squills, ſufficient to diſſolve the Gums—
Add the Juice to this ſolution, ſtrain the mixture, and boil it to the conſiſtence of a plaiſter.

163. Tincture of Bark with Lime Water.

Take of Lime Water, hot, 1½ pint.
In which infuſe
Peruvian Bark in powder, 1½ ounce.
Let it ſtand for eight or ten days, then pour off the clear liquor.
Dose. From two to four ſpoonfuls twice a day.

164. Sedative Injection.

Take Roſe Water, 6 ounces.
Tincture of Opium, 2 or 3 drams.
Mix.—

165. Restringent Injection.

Take Infuſion of Roſe Leaves, without the Vitriolic Acid, } 5 ounces.
White Vitriol, 6 grains.
Acetated Ceruſs, 8 grains.
Mix.—

166. Calomel Injection.

Take Infuſion of Roſes, as above, or Decoction of Bark, } 4 ounces.
Calomel prepared, 2 drams.
Mix.—

167. Mercurial Ointment.

Take Hog's Lard, Quickſilver, } of each equal parts.
Rub them together in a marble mortar, till no globule of the Quickſilver appears.

168. Corrosive Sublimate Solution.

Take of Water, Brandy, or Any kind of Ardent Spirit, } 5 ounces.
Corroſive Sublimate, 10 grains.
Dose. Half an ounce.

No. 169. Corrosive Sublimate Pills.

Take Corroſive Sublimate, 15 grains.
Diſſolve them in
Diſtilled Water, 6 drams.
To this liquor add
Crumbs of white Bread, 2½ drams.
and make 120 Pills.

Dose. Two night and morning, which may be gradually increaſed to four, if the ſtomach will bear them.

170. Mercurial Gummous Solution.

Take purified Quickſilver, 1 dram.
Gum Arabic, 3 drams.
Syrup of Rhubarb, a ſufficient quantity.

Theſe are to be rubbed together in a glaſs, or marble morter, gradually adding a little Syrup at a time, until the whole of the Quickſilver runs into a mucus; then, in the ſame gradual manner, add Roſe Water, 12 ounces.

Dose. One ounce night and morning.

171. Mercurial Gummous Pill.

Take the Mercurial Mucus above deſcribed, and add to it
Crumbs of Bread, ½ an ounce.
Make theſe into pills of ſix grains each.

Dose. Five night and morning.

172. Mercurial Syrup.

Take Mercurial Mucus above deſcribed, formed with Syrup of Roſes inſtead of that of Rhubarb, and gradually add to it of the ſame Syrup four ounces and a half.

Dose. A tea-ſpoonful morning and evening; but let the ſpoon be of Wood, Mother of Pearl, or China—and the doſe may be gradually increaſed.

173. Mezereon Decoction.

Take of the Bark of the Mezereon-root, freſh gathered, } 1 ounce.
Diſtilled Water, 12 pints.
Boil theſe together to eight pints, and, towards the cloſe, add
Liquorice Root bruiſed, 1 ounce.

Dose. Half a pint twice a day.

174. Sulphur Ointment.

Take Flower of Sulphur, 1 ounce.
Fixed Ammonia Salt, 1 dram.
Hog's Lard, 2 ounces.

Mix.—A fourth of this to be well rubbed only on a fourth part of the body every evening.

No. 175. Mercurial Lotion.

Take of Muriated Quickſilver,	1	dram.
Rock Alum,	2	drams.
Purified Nitre,	½	an ounce.
Lime Water,	½	a pint.

Mix.—

176. Mercurial Ointment.

Take Muriated Quickſilver,	10	grains.
White precipitated Quickſilver,	1	dram.
Simple Ointment,	1½	ounce.
Oil of Lavender,	a few	drops.

Mix.—

177. Mercurial Girdle.

Take of purified Quickſilver, 3 drams.
Let theſe be well ſhook with
Lemon Juice, 2 ounces.
till all the globules ſhall ceaſe to appear, then pour off the liquor; and to the killed Quickſilver, (ſo called) let there be added half the Yolk of an Egg, and one ſcruple of Gum Tragacanth very finely powdered. This compoſition muſt be ſpread upon a flannel roller, about the breadth of three fingers, and ſufficiently long to form a girdle to encircle the waiſt, which muſt be there worn.

178. Decoction of the interior Bark of the Elm Tree.

Take the interior Bark of the Elm Tree,	4	ounces.
Diſtilled Water,	4	pints.

Let theſe be boiled to two pints, and then ſtrained.
Dose. Half a pint twice a day.

179. Bark and Sassafras Electuary.

Take Peruvian Bark, very finely powdered,	1½	ounce.
Powder of Saſſafras Bark,	½	an ounce.

Syrup of Sugar, ſufficient to form an Electuary.
Dose. Quantity of a large Nutmeg twice a day.

180. Stimulant Lotion.

Take Britiſh Spirits,	8	ounces.
Ley of Tartar,	1	ounce.
Spirit of Sal Ammoniac,	2	drams.

Mix.—

No. 181. Volatile foetid Mixture.

Take Aſafœtida,	1	dram.
diſſolve theſe in the		
Liquor of Hartſhorn,	2	drams.
Pennyroyal Water,	2	ounces.
Syrup of Saffron,	2	drams.

Mix.---Dose. One or two tea-ſpoonfuls occaſionally.

182. Liniment against Rickets.

Take Palm Oil,	}	of each 2 drams.
Balſam of Peru,		
Spirit of Sal Ammoniac,		
Oil of Nutmeg expreſſed	1	dram.
—— Cloves,	}	of each 20 drops.
—— Amber,		

Mix.—

INDEX.

This not only is an Index of reference, but of explanation; as there are in the Work unavoidably ſome technical Terms, not very readily intelligible to common Readers. Where, therefore, the Words are not explained in the Body of the Work, they are in this Place. And Words marked with an Aſteriſk are referred to the Page where ſuch may be found, with the Senſe given of them. Where the letter F. *is placed before the Figures, they refer to the article in ſome of the Forms of Medicine,* P. 359. 644. 845.

A.

Abdomen, lower belly.
Abdominal, belonging to the abdomen.
Ablutions, cleanſing.
Abſceſs. See Inflammation.
Abſceſs of the liver, not always mortal, how accounted for, 540.
Abſorbent alcaleſcents, how removing ſpaſm, 227; earths, 273; veſſels, what their uſe, 11.
Abſtinence, unavoidable, what neceſſary to be done, 156.
Acetated litharge, 300.
Acerb fruits, 299.
Aceſcent, partaking of the nature of acid.
Acids, what their action and uſe, their diverſified powers, what, 293; diviſions, 294; and alkalines ſtiled demulcents, why, 290; ſaline, 301; vegetable or native, 272. 288; mineral, 272. 288. 295: fermented, 272.
Acidulated waters, 273.
Acid vapours, 252.
Acini,* 34.
Acores, why ſo called, 783.
Acrid ſpirits, 250.
Acrimonious, ſharp, pungent.
Acrimony, imagined not to take place in the blood-veſſels, 291; putreſcent, its effects how remedied, 136; muriatic, its effects how remedied, 137; acid, its effects, how prevented, 136;
Adipoſe, fatty.
Æthiops mineral, 246.
Æther, vitriolic, 229; ſpirit, 239.
Aggregates, different bodies collected into one maſs.
Air, its properties and effects upon the conſtitutions, 88; the moſt ſalutary, 91; bad, its ſigns, 91; which moſt agreeable to valetudinarians, 91; fixable, how communicable to the ſtomach, 750; moderately warm, its effects upon the ſkin, 274.
Aix la Chapelle waters, 571.
Alchohol,* 24. 113. 288. 300, 301.
Ale and porter, their effects, 116. 123; ale, porter, cyder, 300.
Aliment, what, 94.
Alcaleſcent, 34. partaking of the nature of alkali.
Alkali, a ſaline ſubſtance, fermenting when put to an acid; fixed foſſile, 287. 297; fixed vegetable, 287. 297; volatile, 287. 297.
Alkalies, 308; their uſe and action, their diverſified power, what, 296.
Almonds, 250. 288; oil of, 216. F. 646. 649, 650. 654; milk of, F. 359.
Aloes, 264. 306. 310. F. 845, 846.

Aloetic medicines, 281.
Alum, with its preparations, 210. 310; F. 644. whey, 640. F. 654.
Amber, oil rectified of, 229. 310. F. 650; ſalt purified, 229. 272. 295. 300. F. 845.
Amentia, what, cure, 690.
Amenorrhœa, what, and why ſo called, 803; divided into three heads, what, 803, 804; explained, 804; retention, when to be pronounced a diſeaſe, 805; cauſes of the firſt ſpecies, &c. See Chloroſis.—of the ſecond, with the ſymptoms and cure, 807; of the third, 807; whom it chiefly affects, 808.
Ammonia, acetated, or Myndererus's ſpirit, 279, F. 361, 362, 363. 368, 648. 650, 651. 653. 845; prepared, 229. 279. F. 362. 364, 365; water of, 279; liniment of, F. 650.
Ammoniac, ſal, fixed, 272. 283. F. 647. 850; ſpirits of, F. 647. 851, 852.
Ammoniacal copper, 665. 816.
Ammoniacum, gum, 228. 250. 252. 283. F. 648. 650. 845, 846. 849.
Anaſarca, what, and why ſo named, 724, 725; deſcription, 725.
Anaſtomoſing, uniting by contact.
Anchyloſis, * 8.
Angelica, 248.
Angina, whence the term. See Quinſy, 500.
Animal-bile, 263. 266; food, 288. 296; heat, what, and from whence, 68; oil, 229. 310.
Animalcules, ſmall animals.
Aniſeed, 221.
Anodynes, * 233. 250.
Anomalous, irregular, uncommon.
Antacids, 198; their uſe and action, 296.
Anthelmintics, 198; how removing ſpaſms, 227; with their uſe and action, 305.
Antilyſſus pulvis, 146.
Antimonial powder, 278. F. 360. 652, 653. 655; wine, 259. F. 370. 845.
Antimony, 259. 278. 280; cerated glaſs of, 620; precipitated, F. 647.
Antiſeptics, 198; diviſion of, 301; their uſe and action, 298; exhibits apparently contradictory powers, how accounted for, and in what caſes applicable, 298, 299.
Antiſpaſmodics, 197. 225. 297. 300; what underſtood by them, 227; how to be ſelected, 227; their action, 225; in ſome of their ſenſible properties oppoſite; what uſe to be made of the knowledge, 227; to be given in full doſes, how, 228.
Anus, 46. the loweſt extremity of the rectum.
Aorta, * 21.
Aperients, 250.
Apex, top.
Apoplexy, what; why ſo named; deſcription; cauſes; characteriſtic ſigns, 670 to 676; different ſpecies, 671; whom it attacks chiefly, 672; ſymptoms of death, 673.
Apozem antiſeptic purging, F. 367.
Appendicula, vermiformis, 45.
Apples, 294. 299.
Aqueous, watery.
Arabic, gum, 288, 289. 291.
Arachnoid membrane, 17.
Arca, the ſurface contained between any boundaries,
Aromatic tincture, F. 846, 847.
Arrow-root, 288.
Artery, what, its uſes, 10.
Arthritis, what; whence named.
Arſenic, 816.
Artichoke, 263. 273, 287. 295.
Articulation, joint.
Aſafœtida, 228. 252. 278. 280. 282, 283. 300, 301. 310. F. 370. 846. 852. proved by the ſtatical experiments of Sanctorius, a diaphoretic, 279.
Aſarabacca, 260.
Aſcites, what, and from whence named, 724, 725,
Aſparagus, 263, 271. 286. 295.
Aſſarum, 241.
Aſſimilation, what; how performed, 95; to convert into the ſame nature.
Aſs' milk, 628; artificial, 202.
Aſthma, what; whence named; how divided; diviſions properly come under one head, 706; deſcription, 707; cauſes, 708; characteriſtic ſigns, 709; diſtinction, 709; cure, 711; who moſt ſubject to it, 712.
Aſtringents, 197. 206. 288. 300; what; their active powers, 206; Boerhaave's opinion, 207; Cullen's opinion, 207; their action ſpecified; inſtanced in alum, white vitriol, bark, ſteel, pungent ſtimulants, ſedatives, 208; the difference of their continuance of action, 208; catalogue, 210; roots of this claſs, 274; ſome conſidered of the diuretic claſs, 268; ſaline mineral, not to be united with volatiles, why, 410.
Attenuants, 197. 284; what their uſe and action, comprehending diluting, reſolving, inciding medicines, 284.
Attrition, rubbing together.
Atrophy, 565; what; whence named, 741; deſcription; cauſes; characteriſtic ſigns; cure, 742 to 744; in children, the ſymptoms, 742; old men ſubject to it, 743.
Auricles, what, 21.
Aurigo, Aurugo, } 711. See Jaundice.
Axis, center.

B.

Balm, 216.
Balſams, 250.
Barberry, 294.
Bark, Peruvian, 274. 281. 288. 301. 311. F. 365, 366, 367. 370. 644, 645. 654. 845, 846. 848.
Bark, how to be given in dropſy, 730.
Barley, 216. 289.
Barley water ſweetened with honey, 275.
Bath waters, 272. 562. 571. 684. 722.
Bathing, cold, 280, 281. 594; hot baths, 594; a ſalt bath, or ſea bathing efficacious in ſome aſthmas, 712; warm, 275.
Baths, warm, partial, 281; warm, 612. 749; to the feet, 252. 282.
Bauhini valvula, 46.
Bears wortle berry, 211. 268. 300. 308.
Beef tea, its uſe, 112. 201.
Beer medicated, 848.
Bete, 216. 241. 263. 286. 294; leaves, 791.
Betony, 241.
Bibulous, abſorbing, or ſucking up.
Bile what, its uſe, &c. 31.
Bile, or boil. See Inflammation.
Biliary ducts, 31.
Bilious affections, how to be prevented, 75. 142.
Bilious, vomiting, and inteſtinal flux, 609.
Bitter apple, 264. 266. F. 650, 651.
Bitters, 281. 307, 308; aromatic, 250.
Black Flux. See Melæna.
Black water. See Pyroſis.
Black hellebore, 805.
Bladder, what, its uſes, 57.
Bleeding. See Phlebotomia.
Bleeding of the noſe, 633; cauſes; cure, 629, 630.
Bliſters. See Epiſpaſtics.
Blood, what; into what diviſible, 23, 24; a ſtimulant, why, 25; offenſive, by its too great or too ſmall quantity, or acrimony; complaints from thence ariſing, 134, 135.
Blue vitriol, 259. F. 652.
Boil, or bile. See Inflammation.
Bolus, camphorated, 364. 848; opiated, chalybeated, 655; oak bark, 644; calomel, 650; calomel and guaiacum, 650; diaphoretic antimonial cordial, 653; antimonial, 360; cordial ſtimulant, 362; muſk, 364, 365; ſnake root, 395; aromatic bitter, 369.
Bones, what; their uſe, 7; forming the cheſt, what, 26.
Borax, 285. 297.
Brain, what; its uſe, 16, 17.
Briſtol water, 640.
Brandy, 654.
Broom, 272.
Bronchocele. See Scrophula.
Broths, their uſe, 112. 122; fat, or weak, 112. 216.
Bubo, 771.
Buckthorn berries, 264. 267. F. 363.
Bullets, leaden, 471.
Burdock, 277.
Burgundy pitch, F. 631.
Butter, 216.
Butter-milk, 263.

C.

Cabbage, 263. 287. 294.
Calculus, ſtone in the kidneys or bladder.
Callous, hard, or firm.
Calomel, 246. 310. F. 646, 647. 649, 650. 845.
Camphor, 229. 278. 300, 301. 307. F. 361, 362. 364, 365. 367, 368, 369, 370. 647, 653, 654. 845, 846. 848.
Canada, balſam of, 271.
Cancer, 758; what, and whence its name, 759; ſcrophulous patients moſt liable to it, 759; occult, open, what, 759; when termed ſcirrhi, 759; when conſidered as cancers, 759, 760; when cancers lurk internally, how known, 760.
Cantharides, 220. 222. 271. 280, 281. 302. 310. F. 846.
Capillary, 30. hair like.
Capſicum, 221.
Cardia, 38.
Cardamom-ſeed, 221.
Cardialgia, what; from whence named, 560.
Carditis, 519; cure, 520.
Caries. See Inflammation.
Carminatives, what; how removing ſpaſm, 227.
Carraway-ſeeds, 221; oil of, F. 650. 653.
Carrot, 288. 295; wild, F. 652.
Cartilago enſiformis, what, 39.
Cartilages or griſtles, what; their uſe, 7.
Carus, what, and whence named, 676; how relieved, 677.
Caſcarilla, 221, 222.
Caſſia fiſtularis, 263. F. 362.
Caſſia wood, 221.
Caſtor, 229. 280. 282. F. 845; oil, 265, 310. F. 370. 648. 652.
Catalepſy, what; whence named; deſcription; cauſes; characteriſtic ſigns; cure, 677 to 680.
Catamenia. See Menſes.
Catechu, which was called Japan earth, 211. F. 645.
Cathartics, 197, 283: what; their action and uſe, 260; Boerhaave's opinion, 260;

catalogue divided, 263; other powers neceſſary to be known, what, 263.
Catheter,* 586.
Catarrhus ſuffocativus, 713.
Cauſtic alkali, 308.
Cautions neceſſary to be obſerved with reſpect to food, exerciſe, eating, drinking, hunger, &c. 149.
Cawl, what, 35.
Celery, 263. 271. 286. 295.
Cellular ſyſtem, what; its uſe, 15.
Celſus' directions for the conduct of a man in health, 150.
Cephalalgia, Cephalea, what; whence ſo named, 549.
Cervix,* 59.
Ceruſs, white, F. 849.
Chalk, 273. 296. F. 366. 368.
Chalybeate ſprings, 578.
Chamomile, 222. 300. F. 369. 644.
Cheltenham waters, 273.
Cherries, 294. 299.
Chicken water, 611.
Chincough, what, and whence named, 700.
Chloroſis, what, and whence named; deſcription; certain ſigns, 804, 805; cauſes; cure, 805.
Chocolate, its uſe. 111. 113.
Cholera morbus, what, whence named, 608; its ſeat; deſcription, 609; cauſes, 609. 611; characteriſtic ſigns; cure, 611 to 615; the time it moſt commonly appears, 610; Sydenham's modes of giving opiates, 612; emetics and aperients when neceſſary, 614; avoided, 614.
Choleric, abounding with bile.
Chordee, 767. 770.
Chronic, long continuance; complaints, how by neglect occaſioned, 358.
Chyle, what, 42. 96.
Cicuta, 226. 233. 762 to 765. F. 849.
Cinnabar, factitious, 246, F. 845.
Cinnamon, 220, 221. F. 361, 362. 364, 365, 366. 368. 645, 646. 654. 848; infuſion of, 613.
Circulation of the blood, how performed, 22.
Circulatory veſſels, what; their uſe, 13.
Circumciſion, on what account introduced, 65.
Circumvallation, lines of, certain boundaries, beyond which no one is permitted to paſs.
Citron, freſh juice of, 276.
Clap, from whence named, 769. See Gonorrhœa virulenta.
Clavus, what, 819.
Climate, warm, its advantages, 757.
Cloves, 224. 248. F. 852; infuſion of, 613.
Coagulated lymph, or gluten, how ſeparable, 24.
Coagulable, 33. particles cloſely uniting.
Cockles, 273.
Coction, digeſtion.
Cœcum, what; its uſes, 45.
Cœliaca, what; whence named, 609.
Coffee, 114, 115; raw, decoction of, its uſes, 582; roaſted, infuſion of, 711.
Cold iron, 629.
Cold water thrown ſuddenly upon the feet, legs, &c. its effects, 537.
Colic, what; why ſo called; deſcription in general; cauſes; characteriſtic ſigns; cure, 567, 568; a particular inquiry neceſſary; what, and why, 570.
Colic, nervous, 571; deſcription; characteriſtic ſigns; cauſes; cure, 572 to 574; the mode of curing at Charleſtown, 573.
Colic of Poictiers, 572.
Coli valvula, 46.
Colon, what; its uſes, 45.
Coltsfoot, 252.
Columbo-root, 605. 613. 620. F. 645.
Comata, what; why ſo named, defined, 670.
Comfrey-root, 288. 291. 640.
Comminution, dividing or thinning.
Commixture, mixing together.
Compreſſion with a roller at the lower part of the belly, in what uſeful, 813.
Concoction, digeſtion.
Concreſſible, uniting together.
Confection, aromatic, F. 361, 362, 364, 365. 370. 653.
Congeries, a maſs, or heap.
Conical, like a cone, in form like a ſugar-loaf.
Connections of the ſtomach with the mind and diſtant part of the machine particularly proved, 194, 195.
Conſtitutions, the commonly accepted terms explained, from 70 to 80; the common ideas of the terms not well underſtood, 71; the differences, to what owing, 72; farther divided, 81; no one application proper to all, 83; more particularly ſpecified, 125; arranged under particular heads, and modes of conduct preſcribed to each, 126.
Conſtitution, its parts the objects of medicine, 146.
Conſumption, dorſal, why ſo named; deſcription, 531; cauſe; cure, 532; *of different kinds*, what, 524. 529. 531; *of the lungs*, 524; different ſpecies, what, ibid.; divided into two ſtages; its uſe; what, ibid.; deſcription, 525; cauſes, 526; immediate in the different ſtages, ibid.; cure, 527, 528.
Contagion. See Infection.
Contrayerva, 224. 278.
Convolution, rolling round,

Convulſion and ſpaſm, the difference, what, 225; Gaubius's opinion, 226; by what terms diſtinguiſhed; the reaſon, ibid.; diſtinction neceſſary to be known; why, 226.
Convulſions, what, 656; from whence named; how differing from tetanus, one called tonic, the other clonic; why, 661, 662.
Convulſive cough, 700.
Copaiva, balſam, 221. 250. 252. 271. F. 647.
Copper, 210.
Core. See Inflammation.
Cornaro, ſome account of himſelf, how relieved from ill health, 86.
Corn ſalad, 287. 273. 294.
Corpora ſpongioſa, what, 65.
Corroſive ſublimate, or muriated quickſilver, 241. F. 849, 850, 851.
Cough, common, reaſon for treating of it, 697; cauſes, and cure, 698.
Coughing up of blood, deſcription; cauſes; characteriſtic ſigns; cure, 623 to 629; who moſt ſubject to it, 626.
Country more healthy than a city or large town, why, 94.
Cowhage, 222. 306.
Cow itch. See Cowhage.
Crabs, 273. 296; eyes, 273. F. 366. 646; claws, 273. F. 359. 653.
Craſſamentum, what, 24.
Cream, F. 216; bark, 645; mixed with chalk, 790.
Cremaſter muſcle, 63.
Crude, not well perfected.
Cruſta lactea. See Tinea.
Cryptæ,* 782.
Cucumbers, 286. 288. 291. 294; wild, 264. 266.
Cup moſs, 211.
Currants, 294.
Cutaneous, 196.
Cuticular, appertaining to the ſkin.
Cyder, 114. 116. 120.
Cylindrical, like a cylinder, or circular tube.
Cynanche, whence the name. See Quinſy.
Cyſtic bile, 32. bile from the gall bladder.
Cyſtitis, what; whence named, 545. inflammation of the bladder; deſcription; cauſes, ibid.; cure, 546.

D.

Dandelion, 222, 224. 263. 273. 287. 294. F. 846.
Dartos, 63.
Dates, 216. 291.
Dead nettle, 755.
Deadly nightſhade, 765.
Deafneſs, ſome caſes of, errhines uſeful, 240.
Debilities, 669.
Decay of the tooth, how diſcoverable when not perceptible to the eye, in caſes of pain from that cauſe, 554.
Decoction of the branches of the common red fir, or pitch tree, 748; of garlic, 729; of broom, ibid.; of coltsfoot, 755; of pomegranate bark and chamomile, F. 369; of waterdock, F. 848; of mezereon, F. 850; of the interior bark of the elm-tree, F. 851; of the wood, F. 647; of Semirauba, F. 654.
Defluxions, flux of humours upon a part.
Deleterious, deſtructive.
Demulcents, 197. 250. 290. 295. 297; their action and uſe, 290; diviſion of, 292; how remove ſpaſm, 226.
Detergents, 250.
Deterſion, cleanſing.
Detruſor urinæ, 58.
Devonſhire colic, 572.
Diabetes, what; whence named; deſcription; cauſes; characteriſtic ſigns; modes of cure, 638 to 641; different ſpecies, ibid.
Diagonal, a line drawn from angle to angle.
Diaphoretics, 197; what; their action and uſe, 273.
Diaphragm, its uſe, 27; inflammation of, 519, 520.
Diarrhœa, what; whence named, 608; looſeneſs, ibid.; often of ſervice, how known, 621; cured, 622.
Diet, ſuited to different ages, what, 165, 166.
Dietetic remedies, what, 84.
Different effects and motions of a muſcle, 9.
Difficult or painful menſtruation. See Amenorrhœa.
Digeſtion, weak, what, uſeful, 289.
Dilatation, expanſion.
Diluting liquors, what; their uſe, 110; medicines, 284; and nutritive liquors, what, 122.
Dipſas, its bite productive of diabetes, 639.
Diſeaſe, rules for preventing, 150; prevented, made milder, or cured by the operations of the habit, 82; what the conſequences of ſudden change from induſtry to indolence—reverſed, the conſequences—purſued under proper limitations advantageous, how, 161, 162; in general, deſcribed; how diſcovered and diſtinguiſhed; different cauſes and indications of cure; definitions of, 313; cauſes, predisposing, what; remote or inducing, what; on what dependent; proximate; immediate,

ate, what; cure, indications of, what, 314; preventive mode, what; the diviſion of, 315; produced by gout, what, 597; of the ſkin; how conſidered; in two ways; what, 780.
Diſpendium, waſte.
Diſſeminated, to ſcatter or ſpread.
Diuretics, 271. 275. 283; their action and uſe, 268; divided into different heads, 271.
Diuretic ſalt, 272. F. 874.
Dover's powder, how to be given in dropſy, 730.
Draught, cooling, purging, 846; dandelion, ibid.; diuretic, 847; kali, 848; bark, 644; aſtringent, 645; purging, 650; balſam of Peru, 652; gum guaiacum, 653; anodyne, or quieting, 360; ſaline anodyne, ibid.; emetic, 361; purging, 362; caſſia, ibid.; cordial ſaline, 363; cordial aromatic, ibid.; ſnake-root, 365; antiſeptic aperient, 367; antiputreſcent, ibid.; ipecacoanha, 368; ſaline volatile, ibid.; ſaline fermentative, ibid.; aromatic bitter, 369.
Dropſy, deſcription; anaſarca, 725; cauſes, 728; cure, 729; varieties, 729 to 740; all originate from one immediate cauſe; deſcribed, 725 to 728. 734;—of the pericardium, or membrane ſurrounding the heart; deſcription, 727;—of the cheſt, ſee Hydrothorax;—of the head, ſee Hydrocephalus;—of the womb, ſee Hydrometron;—of the belly, ſee Aſcites.
Ductus communis choledochus, 32.
Duodenum, what; its uſe, 43.
Duplicature, any thing doubled.
Dura mater, 16.
Dyſentery, what; whence named, 608; deſcription; different ſpecies; cauſes; cure, 615 to 622; infectious and contagious, how proved, 615; who moſt ſubject to it, ibid.; to whom moſt fatal, 616; ſome diſtinctions neceſſary, what, 616, 617; purgatives adapted to the nature of the diſeaſe, why, 619.
Dyſpepſia, what, and why ſo called, 829; deſcription; cauſes; cure, 830.
Dyſpnea, what, and whence named. See Aſthma.
Dyſuria, } what; whence named, 585;
Dyſury, } deſcription; cauſes; cure, 586, 587.

E.

Ear-ach, what; cauſes; modes of cure, 552, 553.
Ear, dividing the griſtly or cartilaginous ſubſtances, its uſe in epilepſy, 668.
Eating, its exceſs, the inconveniencies, how remedied, 154.
Edulcorated, 57. made milder or ſweetened.
Efflorescences, 195. ſmall red eruptions on the ſkin.
Effluvia, the fine parts flying off from bodies.
Eggs, 288; crude yolks of, 216.
Egg and oyſter-ſhell, their uſe, 296.
Electuary, cinnabar, 845; diuretic, 847; tonic ſtimulant, 848; bark and ſaſſafras, 851; gently aperient, 654.
Elecampane, 250.
Electricity, 220. 594. 684. 806.
Elm tree, inner bark, F. 851.
Elephantiaſis, what; why ſo named, 785, See Leproſy.
Embryo, 60. fœtus imperfect in the womb.
Emerſion, appearance, or coming out.
Emetics, 197; what; their uſe and action, 253. 259; diviſion into eight heads; the uſe from conſidering each diviſion particularly ſpecified, 254; in ſmall doſes, their effects, 214; in the bowels, 264; as emmenagogues, 283; ipecacoanha, F. 365; powder, 618; in pulmonary conſumption uſeful; why, 528.
Emmenagogues, 197. 279; divided, 280; one thing to be particularly obſerved in their application, what, 281; their uſe and action, 279; our ſelection, on what founded, 281.
Emollients, 197; their action, 213; as demulcents, 291; how they remove ſpaſm, 226; catalogue, 216; mucilaginous and farinaceous, preferable to the oily; why, 215.
Emproſthotonos, what; whence named, 656. 658.
Empyema, what; why ſo named, 521, 522; deſcription, ibid.; cure, 523.
Empyreumatic oils, 279. 380.
Emulges, to milk, or drain out.
Emulgents, 54.
Emulſion, oil of caſtor, 370; camphorated, ibid.; oily, 646; opiated, 652.
Endive, 263. 273. 287. 294.
Enteritis, what; why ſo termed, 535; cauſes; characteriſtic ſigns; cure, 536; does not ſo frequently occur as imagined; for what miſtaken, 535; ſudden relief from pain often deceptive; the reaſon, 537; relapſe, how to be prevented, 537, 538.
Ephidroſis, what, and whence named; cauſes; cure; either active or paſſive; from what cauſes, 641, 642; ſweat, cold or warm, what they denote, 642; when to be conſidered a diſeaſe; when not, ibid.

Epidermis,* 63.
Epididymis, 64.
Epigaſtrium, 28.
Epilepſy, what, and whence named; deſcription; cauſes; characteriſtic ſigns; cure, 662 to 669; divided into different ſpecies; the reaſon, 662; differs from convulſion and apoplexy; how, 663; if counterfeited, how diſcovered, 664; various medicines and various methods recommended; why, and what, 665, 666; what ſpecies incurable, 667; hyſteric or uterine, what; how diſtinguiſhed; cured, 667, 668.
Epiſpaſtics, 198; what; their uſe and action, 252. 300. 302.
Epiſtaxis, what; whence named, 623.
Errhines, 197; their action, 238; mechanical and medical, what, 240; arranged with reſpect to their power, 241; their utility in rheumatic affections, 239.
Eruptive fevers, why ſo called; exanthematous; the ſpecific nature of the morbid matter not to be conſidered, why; what to attend to in the cure, 411.
Eryſipelas, whence its name; fever, ſerous inflammatory; Saint Anthony's fire; deſcription, 461; the time of termination, 462; cauſes; characteriſtic ſigns; cure, indications of; evacuations to be cautiouſly purſued, why, 463; local applications, different opinions relative to them, 464; retroceſſion, in caſe of, what to be done; zoſter, zona, ſhingles, 465; not always cuticular, 465; repelled upon the brain, the ſymptoms; alſo upon the lungs; mortification, if threatened, the remedies; when to be dreaded, 466.
Eſſential oils, 221. 279. 300.
Euphorbium, 222. 241. 302.
Evacuants, all general ſtimulants; the reaſon, 239.
Evacuations, ſanguinary, 622; general doctrine, 622, 623; divided, in what manner, 623, 624; occaſioned in four different ways, how, 623; morbid, how divided, into alvine, ſanguinary, ſerous, either active or paſſive, the reaſons, 606; indications of cure in general, 607; ſerous and lymphatic, 688; alvine, 608; different ſpecies deſcribed, 608, 609.
Evaneſcent, extremely minute.
Evolution, diſentangling.
Exacerbation, increaſe of violence.
Exanthematous,* 411.
Exceſs of every kind detrimental, why; in eating more than in drinking, why, 151.
Excretory veſſels, what; their uſe, 11.
Exerciſe to be adapted to the prevention of particular diſeaſes into which people are liable to fall, 162; diviſion of, 163; its great intent, 163; what, 280; moderate, its uſe, 274; divided, 101; different, their effects, ibid.; and reſt, their uſes, 100, 101, 102; mental as well as corporeal, 100; Sydenham's opinion, ibid.
Expectorants, 197; what; their action and uſes; by what means aſſiſted, 249; which act by ſtimulating the lungs, 252; by taking off ſpaſmodic affections, 253; by irritation, ibid.; by lubricating and relaxing, ibid.
Exudation. See Inflammation.
Eye-water, anodyne, F. 647.

F.

Falſe ribs, 53.
Farinaceous grain, mealy, as wheat, &c.
Fat, 216.
Fatigue, after it a common cuſtom, what; injurious, why; what more proper, 156.
Favus, why ſo called. See Tinea.
Fear, a relaxant; grief, a relaxant, 214.
Febrile affections in general, deſcribed, 315.
Fennel-ſeed, 271.
Fermentation. See Inflammation.
Fern-root powder, 306.
Ferruginous, appertaining to iron.
Fevers, the diviſion of; continued, what; defined; their diviſion; general deſcription, 316; how to proceed in, before their particular natures are ſpecifically known; ſimple, why ſo called;—*mixed*, why ſo termed; difficult to be referred to any claſs; the reaſon, 371; the difficulty attempted to be ſolved, 372, 373; mixed or anomalous, defined, 374;—*eruptive*, one general obſervation reſpecting them, 429.
Fever, *bullous*; veſiculary, 467;—*inflammatory*, what; vaſculo-ſanguineous inflammatory, why ſo called, 324; deſcribed; heat, inflammatory, what, 325; perſons moſt ſubject to this fever, 326; characteriſtic ſigns; cure, ibid.; pulſe, not to be deceived by it, 327; bleeding adviſed with extreme caution, why; vomit, when to be prohibited, when uſeful, 328; bleeding employed before a vomit, why, 329; bliſters, when to be applied, 331; different opinions, 332, 333; criſis, ſigns of, 332; in deſperate caſes not to deſpair, why, 333; bliſters, how applied under deſperate circumſtances, 334; vapour bath, when uſeful, ibid.; rheumatic affections, how relieved, alſo dyſenteric, 335;—*bilious remittent*, whence its name; cure;—*marſh remittent*, 395; when it occurs, and how cured; how to be

be prevented, 396;—*intermittent*, whence its name, ibid.; deſcription of the different ſtages, 397; intermiſſion, what; foretelling the violence of the hot by the degree of the cold, erroneous; in what countries endemial, 398; their diviſion ſpecified; from whence denominated tertian, &c.; cauſes; who moſt ſubject to this complaint; characteriſtic ſigns, 399; cure, indications of, 400; bark, how, and the quantity neceſſary to be given between the fits of intermittents, 401, 402; what to be done to prevent a relapſe; in the cold and hot fits, liquids how to be uſed; bark, ſubſtitute for, where it diſagrees, 402; medicines neceſſary to be coupled with the bark in intermittents; vomits, in obſtinate caſes, when to be given; opium alſo, 403; bark failing to cure properly adminiſtered, to what owing; bark proving purgative, how checked; if aſtringent, how aſſiſted; bark, the beſt mode of exhibiting it to children, 404;—*hectic*, what; chronic remittent without criſis; why ſo called, ſee Hectic Fever; what conſidered by different authors, 406; deſcription; Dr. Heberden's remarks on this fever, what, 407; from the firſt ſtage of a watery head, difficulty diſtinguiſhed; cauſes; characteriſtic ſigns, 408; cure, the indications of, 409; Briſtol waters, 410; —*ſimple continued*, what; vaſculo plethoric, what; deſcription; cauſes; cure, 318 to 324; antimonials, caution in continuing them recommended, why, 320; emetics, when neceſſary; Sydenham's opinion; glyſters, when neceſſary, 321; affections, particular, how alleviated, 322; critical days, which; criſis, cautions neceſſary to be obſerved in pronouncing, 323; when perfect, 324; diet, how to be adminiſtered after a fever, ibid.;—*miliary*, whence its name, its exiſtence doubted, but not univerſally; ſometimes ſymptomatic, ſimple, and complicated; deſcription, 452; cauſes; characteriſtic ſigns; the nature of the fever, what, conſidered; bleeding rarely neceſſary: to be treated according to its nature, 454, 455; bliſters, how to be applied, 455; ſymptoms of great danger, what, 456; time of recovery, 457, 458; who moſt ſubject to it, ibid.; apt to return, at what time; often ſeizes lying-in women; nature of this fever nervous, why; ſometimes putrid, 458; in caſe of looſeneſs, what to be done, 459; favourable and unfavourable ſigns, 459, 460. 461; eruptions, which the moſt favourable, 460;—*nervous*, what, 335; deſcribed, 336; cauſes, 337; characteriſtic ſigns; cure, indications of, 338; bleeding in general injurious; when it may be allowed; leeches, when neceſſary, or cupping; ipecacoanha preferable to tartarized antimony, why, 339; gentle aperients adviſeable, why; profuſe ſweating miſchievous; particular attention to diet recommended, why, 340; bliſters, neceſſary rules to be obſerved reſpecting them, 341; bark, when to be given, 342; muſk, when neceſſary; in looſeneſs, what to be done; in thruſh, what to be done, 343; ſalivation coming on, Dr. Huxham's opinion; ſymptoms favourable and unfavourable, 344;—*remittent*, what; whence ſo called, 387; divided into quotidian, tertian, and quartan, why; of no uſe, why; deſcription, 388; called bilious, improperly, why; where endemial; ſometimes epidemical; cauſes; characteriſtic ſigns, 390; degrees of danger, by what perceived; cure; great cautions neceſſary in the conduct, the reaſons, 391; favourable ſymptoms; unfavourable, how to be relieved or conquered, 392; if not quickly ſucceſsful, what the conſequences; bark in every ſtage not neceſſary, though in ſome extremely uſeful, the reaſons; niceſt caution neceſſary with reſpect to bleeding, why, 393; in the Weſt Indies, how managed; the varieties, how to be treated, 394;—*puerperal*, or *child-bed*, deſcription, 375; cauſes, 377; characteriſtic ſigns; cure; the days of favourable termination, what, 378; hopes, on what founded, 379; chamomile-tea better omitted, why; vomiting, when neceſſary, to be promoted by the eaſieſt means, why, and how, 380, 381; peculiar circumſtances ſometimes attendant, what, and how alleviated, 381, 382, 383, 384; the preventive mode neceſſary to be cloſely purſued, why, 384;—*all fevers* to which they may be reduced, and from the action of what parts they are occaſioned; the reaſons; hence the modes of cure deduced, 384, 385, 386;—*putrid*, what; ſanguineo-putreſcent, why ſo called; why at its commencement ſometimes putting on inflammatory, at others nervous appearances; the reaſon, 345; deſcription; to be diſtinguiſhed in its earlieſt attack; 346; the reaſon; how; heat, peculiar, how diſcovered; characteriſtic ſigns, 348: cure, indications of; bleeding not neceſſary but on a particular occaſion; that ſpecified, 349; profuſe diſcharges not to be occaſioned, why; bark, when to be given; unneceſſary to wait, as in other

fevers, for a remiſſion, 350; ſtimulants with bark, when adviſeable; the good effects, how produced; corroborated by Huxham's opinion of the mode of the fever being carried off, 351; wine, which moſt eligible, 352; modes, the different ones of its termination, what; ſudorific, the moſt certain one in nature, what, 353; accidental circumſtances, to be attended to, 354; what, and how alleviated, 354, 355, 356, 357; air, fixed, its uſe, 354; bark, a ſubſtitute for, 355; after the fever, dropſical ſwellings coming on, how cured; ſteel given in ſubſtance, why, 357; —*ſcarlet*, whence its name; into what divided;—*nettle-raſh ſcarlet fever*; deſcription, 449; how diſtinguiſhed from the meazles; cauſes; characteriſtic ſigns, 450; cure; convulſions ſometimes come on, how alleviated; doubts of the exiſtence of this fever ill founded, 451;—*ſcarlet malignant*, 452. 508.
Fibre, what, 12.
Figs, 216. 291. 294.
Filamentous, appearances like threads.
Fiſh, 288.
Fleſh, its firſt uſe, the reaſon of, 97.
Flowers of lady's ſmock, 665.
Fluids, what, 6.
Fluor albus. See Leucorrhœa.
Fœcal halitus, offenſive effluvia of the fæces.
Fœnugreek, 216.
Follicles, 56. ſmall glands or bags.
Fomentations, 281.
Fomentation, dry, 722; diſcutient, F. 647; ſedative, F. 650.
Fomes,* 355.
Fontanelle,* 833.
Food, animal, what; which of them moſt nutritious; how procured, 201; our firſt, what; how altered, 97; animal, its medical virtues, 203; animal, vegetable, their different properties, 100; its nutritious part, of what it conſiſts, 98; a conſtant, quick repetition neceſſary, why, 98; animal, not to be our only ſupport, why, 99; a greater propenſity to one than another, the reaſon, 99; ſhould be properly proportioned in quantity and quality to exerciſe, 155; animal, alters its properties from the culinary proceſs it has undergone, why, 204; by quantity more than quality, injurious, 206; vegetable, the moſt nutritious, what, 204; vegetable, moſt difficult of aſſimilation, why, 203; vegetable, its medical virtues, ibid.
Foſſa,* 29.
Fovea,* 31.
Fox-glove, 260. 272. 281.
Friable, eaſily reduced to powder.
Fridtions, 274; ſtrong, 275.
Frœnum,* 770.
Fruits, ſweet acid, 287.
Fumigation, the reception of effluvia or vapour on any patt; of tobacco to the uterus, 281.
Fundus uteri, 61.
Fungous excreſcences, ſpongy productions.
Fungi, muſhrooms, truffles, morelles; different from every other vegetable in their nature, why, 205; correctors of animal food, ibid.

G.

Galbanum, 229. 283.
Gall bladder, what; its uſe, &c. 31.
Galls, 212.
Gall-ſtones, certain ſymptoms of, 576.
Gamboge, 264. 267. 306. F. 847.
Gangrene. See Inflammation.
Gargles, detergent, F. 366. 648.
Garlic, 221. 252. 271. 295,
Gas ſylveſtre, 118. ſpirit, ſuch as riſes from fermenting liquors, now called fixed air.
Gaſtric, belonging to the ſtomach;—juices, 42.
Gaſtritis, what; whence named, 532.
Gaſtrodynia, what; from whence named, 559, 560.
Geneva, the different ſorts, what, 117.
Genſing, 222.
Gentian, F. 361. 848.
Gilead balſam, 221. 250.
Ginger, 221, F. 646, 650, 652.
Girdle, mercurial, F. 851.
Gland, what; its uſe, 12; conglobate,* 754; conglomerate,* ibid.
Glans, penis, what, 66.
Glauber's ſalts. See Natron vitriolated.
Globus hyſtericus,* 763.
Glottis,* 788.
Gold or ſilver, ſolution of, in particular acids, 264.
Gonorrhœa virulenta, what; whence named, 766; improper, why; to what altered, ibid.; proceeds from the ſame cauſe as the lues venerea; the reaſons, 765; deſcription, 766; ſymptoms in men, ibid.; in women, 767; purulent diſcharge not always the effect of venereal taint; cautions neceſſary in declaring the nature of the diſeaſe, why, 768; characteriſtic ſigns, ibid.; cure, 769.
Gluttony, a caſe of its conſequences, 154.
Glyſter, bark, F. 645; irritating, F. 649; with bitter apple, F. 651; ſedative, F. 651. 659; terebinthinate, F. 652; domeſtic; common,

common, F. 363; antiſpaſmodic, F. 813; fœtid, F. 741; ſheathing and anodyne, F. 620; of freſh urine and ſage infuſion, F. 578.
Gout, what; whence named; deſcription, 595; cauſes, 597; characteriſtic ſigns; cure, 598; diviſion of, 595; who moſt ſubject to it, who not, 598, 599; if in the head or lungs, ſtomach or bowels, what to be done, 604; how alleviated or weakened in its attacks, 139.
Grains of paradiſe, 221.
Grapes, 294.
Graſs and roots, 272.
Gravel, 580.
Grief, a relaxant, 214.
Ground ivy, 222, 223. 252.
Gruels, their uſe, 111. 114.
Guaiacum, tincture of, with quick lime, how made, 592; wood, 221. 278. F. 647; gum, 221. 252. 263. 266. 278. 281. F. 647. 653.
Gullet, 37.
Guts, the ſmall ones, what, 43; thick or large, what, 45.

H.

Hartſhorn prepared, 273. 296; volatile ſalt of, F. 845; liquor of, F. 852.
Harrowgate waters, 272. 307. 722. 757.
Hæmaturia, what; whence named, 623.
Hæmatemeſis, what; whence named, ibid.
Hæmoptyſis, what; whence named, ibid.
Hæmorrhages, what; whence named, 622.
Hæmorrhoidal veins, thoſe ſpread upon the rectum and anus.
Hæmorrhoids, what; whence named, 624.
Head-ach; cauſes; incurable, ſpecified, 551; modes of cure, 549, 550, 551; general rules, 552.
Heat, what, 220; united with motion, what, 277.
Health, a deſcription of, 149; the moſt perfect ſtate not far diſtant from diſeaſe, 150.
Heart, what; its uſe, 20; heartburn, ſee Pyroſis.
Hedge hyſſop, 222, 223. 264. 266. 271.
Hellebore, black, F. 847.
Hemicrania, whence ſo named, 549.
Hemiplegia, what; whence named, 680.
Hemlock, 233; recommended by Storck too highly; where ſerviceable; its doſes; Cullen's remark to be obſerved, 236. F. 849.
Henbane, 234; how differs from opium, 236; Storck's opinion, 237; Home's experience, ibid.; a caſe related by Savage of its curing cataract, produced a trial, the effect, ibid.
Hepatic, 30; appertaining to the liver, duct, 31.
Hepatalgia, what, and from whence named, 574.
Hepatirrhœa, what; whence named; cure, 608, 609. 622.
Hepatitis, what; whence ſo termed, 538.
Herb ſnuff, what a ſuperior compoſition, how operating, 241.
Herpes ficoſus, 783; herpes, why ſo called, ibid. See Tetters; miliaris, ibid.; puſtulorum. See Tinea.
Heterogeneous, conſiſting of different natures.
Hip gout; deſcription, 588, 589; cure, 594.
Hips, 291.
Holy thiſtle, F. 847.
Honey, 216. 250. 263. 275. 291.
Hooping-cough; deſcription, 701; definition, 702; cure, 702 to 706; appears ſometimes like a common catarrh, 701; hooping accounted for, 701, 702; danger, when to be ſuſpected, 705.
Hops, 222.
Horehound, 250.
Horſe-radiſh, 221, 222. 252. 260. 271. 302, F. 847.
Houſes, the moſt healthful ſituation, what, 93; how diſcovered, 92.
Human machine, of what it conſiſts, 5.
Humours, natural, what; how creative of diſeaſe; accidental, what, 134; partial, what; where generated, 138.
Hunger, ſevere, after it to eat immoderately, its conſequences; feeding full and conſtant, after it abſolute faſting, its conſequences, 157.
Hydatids, 726.
Hydrocephalus, what; whence named, 724. 734; particular account of, why, 734, 735; deſcription, 735; cauſes, and modes of cure, 736; congeſtion, or ſlight inflammation, forerunner of this complaint; attempted to be exemplified in three caſes, 737, 738.
Hydromel, 275.
Hydrometron, what, and whence named, 723. 728.
Hydrophobia, what, and whence its name, 840; Mead's alteration more eligible, why, 840; diviſion; deſcription, 841; a primary invariable mark of the attack, what, ibid.; cauſe; cure, 841, 842; characteriſtic ſigns, 844.
Hydrothorax, what, and whence named, 724. 726; more common than imagined, 727.
Hypochondriac people, why called Sputatores, 242.
Hypochondriaſis, hypochondriac Diſeaſe, what, and why ſo called; deſcription, 817;

817; when it moſt commonly appears, and in whom, 819, 820; when moſt violent, the ſymptoms, 820; cauſes; characteriſtic ſigns; cure, 820, 821.
Hypochondre,* 817.
Hypnotic,* 233.
Hyſſop, 222, 223, 241, 250, 252.
Hyſteria—hyſteric diſeaſe, what, and whence named by the ancients, 808; deſcription, 809; a certain ſymptom, what; ſo conſidered by Sydenham, ibid.; ſymptoms on recovery, what, 810, 811; cauſes, 811. 813; not to be attributed ſolely to morbid affections of the womb, why, 811; defined, 812; characteriſtic ſigns, ibid.; cure, 813; opium, when pernicious, when uſeful, 814; Sydenham's opinion relative to this diſeaſe; his practice erroneous, 815.
Hyſteria-hypochondriac diſeaſe, why ſo called, 825, 826; deſcription, 826; cauſes; characteriſtic ſigns, 827.

I. J.

Jalap, 264. 267. 306, 310. F. 362. 646. 649. 651. 846. 847.
Jaundice, Hoffman's method of curing, 723; what, and whence named; deſcription; characteriſtic ſigns; cauſes; cure, 718 to 724.
Ices, 626. 681.
Ichor,* 353.
Icterus. See Jaundice.
Iſthioſis, what; whence named, 786. See Leproſy.
Idiopathic,* 469.
Idiotiſm. See Amentia.
Jelly, hartſhorn, its uſe, 112; iſinglaſs, its uſe, ibid.
Jejunum, what; its uſes, 44.
Ignorance of, or inattention to, conſtitution, the conſequences, 4.
Ileum, what; its uſes, 44.
Impacted, to drive cloſe and hard.
Impetus, force.
Inanition, want of proper fullneſs.
Incarcerated, confined.
Inciding medicines, 284.
Incitability, what, 18. 68; and irritability, reaſons for adopting the terms, 69.
Incraſſant, thickening.
Incubus,* 129.
Indian pink root, 306.
Indigeſtion. See Dyſpepſia.
Indigenous, native, of the ſame country.
Inebriation with numbers relaxant, 214; its effects, how obviated in different conſtitutions, 3.
Infarction, ſtuffing up.
Infection and contagion, their difference; what; the uſe from thence, 412.
Inflammation, or inflammatory diſeaſes; on inflammation; its nature and general hiſtory; fever in inflammations, what to be conſidered, 468, 469, 470; idiopathic; ſymptomatic; the particulars obſervable in inflammations, what; how produced, 469; in what places the pain is moſt violent, the reaſon; local inflammatory cauſes from external accidents produce inflammation, 470; the conſequences, what; owing to fever, how produced; the diſturbance of the conſtitution, and degrees of danger, in proportion to the conſequence of the part affected, 471; the modes of termination, reſolution, exudation, ſuppuration, mortification, 472, 473; ſcirrhus, 472. 474; abſceſs, fermentation, gangrene, ſphacelus, caries, 473; mortification, the ſymptoms of, and when moſt likely to occur, 474; the moſt eligible modes of termination, which and why, 475; inflammatory complaints, the modes of cure; reſolution how brought about, 476; wine-lees, bean-meal, 477; in abſceſs, how to proceed, 478; gum elemi ointment; green baſilicon; bark in theſe caſes, when neceſſary, when mercurials, 479; boil, what; core, what; mercurials when in theſe caſes neceſſary; deep-ſeated, how to be treated, 480; active caſes of, what; paſſive caſes of, what; how to be treated, 481; ſome niceties neceſſary to be obſerved in our applications, ſpecified; abſceſs, critical, what; the mode of treatment, 482, 483; metaſtaſis; exudation, how to proceed in, 483; tubercles; eryſipelas, from external injury, how to proceed, 484; mortification, how to proceed in; how manifeſting itſelf, 485, 486; when attacking different conſtitutions, 486; ſcirrhus, how to proceed in, 487;—*of the head and neck*;—*of the brain*; *phrenitis*, why ſo called; deſcription, 488; cauſes; characteriſtic ſigns; when it terminates, and how generally, 489; often degenerates into other diſeaſes, as mania, &c.; diſtinguiſhed from delirium, how; when idiopathic; when ſymptomatic; how known, 490; good and bad omens, what; cure, indications of, 491; the period of termination, 492; —*of the breaſt*, 512;—*of the ear*, *otalgia* and *otitis*; whence the name; deſcription, 493; cauſes, and cure, 494;—*of the eye*; deſcription; three things to be particularly conſidered, ſpecified; characteriſtic ſigns; cauſes, 496; cure depen-

dent

dent upon the cauſes, particulariſed, 497; when ſupported by any morbid matter in the habit, what to be done, 499; what to be done to prevent a relapſe in thoſe ſubject to them, 500;—*of the eyes*, errhines uſeful, 240;—*of the diaphragm*, 510; cure, 520;—*of the kidneys*; deſcription; cauſes, 542; characteriſtic ſigns; cure, 543; eaſily diſtinguiſhable from lumbago, how, 542; *ſuppurations*, how diſcoverable, 543: under this people live many years, why, ibid.; the moſt frequent ſource, what; how diſcoverable, 544;—*of the inteſtines*, ſee Enteritis;—*of the liver*; deſcription, 538; cauſes; characteriſtic ſigns; cure, 539; in affections of different parts, the ſymptoms different; the uſe of this diſtinction, 538;—*of the lungs*; deſcription, 517; diſtinguiſhed from pleuriſy, how; cauſes; characteriſtic ſigns; cure; termination different from the former, what, 518;—*of the mediaſtinum*, ibid.; cure, 520;—*of the muſcles of the lower belly*; deſcription; cure; ſometimes miſtaken for that of the liver, how diſcoverable, 547;—*of the omentum*, or *caul*; cure, 546, 547;—*of the pericardium*, 519; cure, 520;—*of the peritoneum*; deſcription, 546; cure, 546, 547;—*of the pleura*; how divided, why, 512; deſcription; cauſes, 513; characteriſtic ſigns; cure, 514; ſeneka; rattleſnake-root; the lancet may be uſed, though patients expectorate, under ſome circumſtances; relief, how perceived, 516; expectoration to be renewed, under what circumſtances, and how, 517;—*of the ſtomach*; deſcription, 532; cauſes; characteriſtic ſigns; cure, 533; poiſon the cauſe, what to be done, 534;—*of the womb*; deſcription, 793; cauſes; divided into three ſpecies; cauſes of the firſt; cure, 794; of the ſecond, and ſymptoms; of the third, and ſymptoms, 795.

Inflexion, bending or turning.

Infuſion of quaſſia wood and ſnake-root, 644; of carrot-ſeed, 652; tonic, 654; vinous, of bark, 365; aromatic bitter, 370; of tamarinds, 363; mint; penny-royal, 808.

Inhaling, to draw in.

Injection, ſedative, 849; reſtringent, 802. 849; calomel, 849.

Ink, 789.

Inoſculate, conjunction of veſſels by their extremities.

Inſania, infanity, 686.

Inſpiſſants, what, 197; their uſe and action, 297.

Inter ſe, among themſelves.

Intercoſtal muſcles, their uſe, 27.

Intermittents not always to be taken off immediately, why; ſubdued by other diſeaſes, 405.

Interſtices, 60. ſpaces between the folds.

Inteſtines, how fixed, 49.

Introduction, 1.

Introſuſceptio,* 536.

Ipecacoanha, 259. 278. 311. F. 361. 365. 368. 654.

Iron, with its preparations, 210. 281. 283. 311. F. 369. 648. 847, 848; ley of, 605.

Irritability, what, 18. 68.

Iſchiatica, 588.

Iſinglas, 288, 289. 291.

Iſſues, 302.

Itch, common; deſcription; cauſe, 781, 782; who moſt ſubject to it, 781; indications of cure, 786; characteriſtic ſigns; modes of cure, 787.

Jugular vein,* 673.

Julep, cordial camphorated, 361; cordial, 362; valerian; muſk, 364; abſorbent, 366.

Juniper berries, 271. F. 848; ſpirit of, F. 651.

K.

Kali infuſed in Rheniſh wine, 729; prepared, adminiſtered in the rickets, how; its uſe; madder uſeful, 838; acetated, or diuretic ſalt, 267. F. 846; with fixed air, 308; tartarized, or ſoluble tartar, 265. 297. F. 367. 370; and vegetable alkali, 273. F. 359. 360. 368. 848; vitriolated, or polychreſt ſalt, 265. F. 360. 649. 653.

Kidneys, what; their uſe, 53.

King's evil, or ſcrophula, 751.

Kino, 211.

L.

Lacteals, 11. 44.

Lactiferous, 177. bringing milk.

Lacunæ,* 66. drain or furrow.

Llandridod water, 757.

Lamina, 12. 50. layer, or thin plate.

Lavender, 221; ſpirit of, F. 361, 362; 650. 654. 846; oil of, F. 851.

Lead, with its preparations, 210.

Leek, 221. 252. 271. 288. 295; juice of, cured a dropſy; how given, 731.

Leguminous vegetables, ſuch as abound with matter ſimilar to peas, beans, &c. called pulſe.

Leienteria, what; whence named, 609.

Lettuce, 263. 273. 294.

Lemons, 294; peel, 222. F. 848; juice, F. 359, 360. 367, 368. 851.
Leproſy, what; why ſo named; deſcription, 785; moiſt and dry, how diſtinguiſhed; on what it depends; indications of cure, 786; characteriſtic ſigns, 791; calomel and camphor, how given, 792.
Lethargy, what, and whence named; how relieved, 676, 677.
Leucophlegmatia, what, and whence named, 725.
Leucorrhœa, what, and why ſo named, 799; deſcription, 800; how to be diſtinguiſhed from that proceeding from a venereal taint, 800, 801; who are moſt ſubject to them; cauſes; cure, 801.
Ligaments, what; their uſe, 8.
Ligamenta lata, 59.
Lilly-root, white, 216.
Lime water, 273. 296. 308. F. 366. 645. 647. 654. 849. 851; quick, 308.
Linctus, oily, 646.
Liniment againſt the rickets, F. 851; volatile opiated; ſedative; camphorated, 650. 654.
Linſeed, the beſt emollient, 215, 216; oil, 306. F. 363. 651.
Lippitudo. See Scrophula.
Liquids, abſtinence from, or indulgence in, in dropſies, opinions relative to them, 731; we in common drink their properties and effects; how divided, 110.
Liquorice, 291. F. 647. 850.
Lithiaſis, what; whence named, 583.
Lithontriptics, 198; what; their action and uſe, 307; what meant in general by the terms, 308, 309.
Liver, what; its uſes, 28.
Living ſolids, what, 12, 13.
Lixivium ley, 57; martis, 605.
Lobes, 29. a diviſion or diſtinct part, uſed for a part of the lungs.
Lobſters, 273.
Lobule, 29. a ſmall lobe.
Lochia, the diſcharge incident to women in childbed.
Locked jaw. See Triſmus.
Logwood, 212. F. 645.
Looſeneſs. See Diarrhœa.
Lotion, mercurial; ſtimulant, 851; camphorated; antiputreſcent, 647.
Lotions, 274; and repellent coſmetics dangerous, why, 138.
Lues venerea, what, 771; deſcription; certain ſymptoms; venereal eruptions, tubercles, or puſtules, how diſtinguiſhed, 772; venereal ulcers of the mouth, and pains, how diſtinguiſhed, 773; hard indolent venereal ſwellings, how diſtinguiſhed, 773, 774; abortions, how known to proceed from a venereal cauſe, 774; in whom moſt violent, and extremely difficult to cure, ibid; cauſes; mode of cure, 775; what to be done when mercury will not alone cure, 778; nodes, and ſwellings of the perioſteum remaining after a mercurial courſe, how relieved, ibid.
Lumbago; deſcription, 588, 589; cure, 594.
Lungs, what, 19; their uſe, 20; affections of, 697; ſubject to be loaded with phlegm, how remedied, 144.
Lymphatics, 11.

M.

Mad animals, the effects of their ſaliva, how prevented, 146.
Madder, 211.
Madneſs, 686.
Mace, 221. 275.
Magneſia, 264.
Malt, F. 848.
Malvern waters, 273.
Mania and melancholy, different degrees of the ſame complaint; Aretæus's and Trallian's opinions, 686; deſcription; cauſes; characteriſtic ſigns; cure, 687 to 697; Hoffman's opinion, 686; ſymptoms preceding the attack, 688; which ſpecies are incurable, 690; warm bath, Hoffman's and Cullen's opinion, 692; Locher's mode of cure, what, ibid; ſome deviation from the general mode of cure neceſſary, what, and why, 694, &c.
Manna, 263. 265. F. 360. 362. 363. 367. 370. 649.
Marjoram, 241.
Marſh mallows, 216. 289; Syrup, F. 646.
Marrow, how fixed; its uſe, 7.
Maſtication, the act of chewing.
Maſticatories, medicines only to be chewed.
Maſter wort, 248.
Maſtich, herb, 241.
Materia medica, a conciſe reaſon againſt it; form of, 310.
Matter in the lungs not always deſtructive, how accounted for, 523.
Matrimony, 806.
Meadow ſaffron, 272.
Meaſles, at what time they generally make their appearance; whom they moſt commonly attack; by what propagated, 438; the attendant fever, of what nature conſidered; deſcription; its progreſs divided, 439; anomalous or irregular; deſcribed, 441, 442; cauſes; characteriſtic ſigns, 442; cure of the different ſpecies, 443, 444, 445; great attention to be paid to the lungs; perplexing ſymptoms occur ſometimes, what, and how alleviated; unfavourable ſymptoms, what, 444; ano-

malous, favourable and unfavourable omens, what; inoculation of, recommended, the reaſons, 445.
Meconium, 47. contents of the bowels of a new-born infant.
Mediaſtinum, 19; what; inflammation of, 518; cure, 520.
Medical axiom, the beſt; what, 313.
Medicine, their powers and modes of action conciſely ſpecified, 192; the action of, in different parts dependent on the ſtomach, how proved, 194; their action divided into five heads, 197; which act upon the inert ſolids, 197, 198; which act upon the living ſolids, 197, 218; which act upon the fluids through the ſyſtem, 284; which manifeſt their ſenſible action chiefly, if not ſolely, in the firſt paſſages reſpecting the fluids, 197. 293; which produce their conſequences from external application, or on ſubſtances formed within the machine, and lodged without the verge of circulation, 198, 302; the different forms which, under particular circumſtances, moſt eligible, why, 311; the active doſes, how generally aſcertained, 212. 311; advantages to be acquired by carefully peruſing that part of the work, what, 312; forms of, 359. 644. 845; which relax, ſee EMOLLIENTS; which bind, or give firmneſs, ASTRINGENTS; increaſe the force of circulation, STIMULANTS; take off convulſive affections, and alleviate pain, ANTISPASMODICS and SEDATIVES; cauſe ſneezing, ERRHINES; a flow of ſaliva, or ſalivation, SIALAGOGUES; coughing up of viſcid matter from the lungs, EXPECTORANTS; vomiting, EMETICS; purging, CATHARTICS; promote a flow of urine, DIURETICS; increaſe perſpiration, or promote ſweating, DIAPHORETICS; promote the menſes, EMMENAGOGUES; thin the humours, ATTENUANTS; thicken them, INSPISSANTS; ſheath them, DEMULCENTS: counteract acidity, ANTACIDS: alcaleſcent acrimony, ANTALKALINES; correct putridity, ANTISEPTICS.
Medlars, 211. 299.
Melæna, what: whence named, 609.
Melancholy. See Mania.
Meliorating, 137. making better.
Melon, 286 288, 291. 294.
Membrane, what, 12.
Men dying of hunger, how affected, 98.
Menorrhagia, what; why ſo named; active or paſſive, 797; deſcriptions and cures, 797. 798, 799.
Menſes, 61; what, and why ſo named; when they make their appearance; when ceaſe; when ſalutary; when otherwiſe; when immoderate, 797; how promoted; accounted for, 280.
Menſtrua. See Menſes.
Menſtruum, all liquors uſed as diſſolvents, or for extracting the virtues of any ingredients by infuſion or decoction.
Mental affections; their effects more or leſs violent, agreeable to the peculiar ſtate of the conſtitution; diviſible into two heads, 106, 107; volatile, ſaturnine, or active and ſedative, 107; on what occaſion they are to be inculcated ſeparately, 108.
Mercurial gummous pill; pills, 246; waſh, 789.
Mercury, 220; preparations of, 222; mercurial ſolution; gummous pills; ſyrup, 850; uſeful in pulmonary conſumptions; at what time; which preparation the moſt eligible, 527; Engliſh, 287.
Meſenteritis, what; from whence named; deſcription, 547; cure, 546, 547.
Meſentery, what, 50; inflammation of. See Meſenteritis.
Meſo-colon, what, 50,
Mezereon, or ſpurge olive, 278. F. 647.
Miaſma, fine ſubtle particles productive of infectious and contagious fevers.
Midriff, its uſe, 27.
Milk, its nature and uſe; which the beſt, 113. 202. 216. 642; produces different effects in different conſtitutions, what, 113; its medical virtues, 203. F. 363. 367. 653. 654; mixt with ſuet, its uſe, 112; new, large draughts of, when uſeful, 534; whey, 286. 263. F. 363.
Millipedes, 222. 755.
Miners colic, 572.
Mint, ſpear, 233. F. 846; tea, a powerful reſtrainer of vomiting, 223; leaves of, boiled in port, and laid on the pit of the ſtomach and wriſts, ſtops vomiting, 570. 613.
Miſletoe of the oak, 816.
Mithridate, F. 651. 848.
Mixture, ammoniacal, F. 845; tonic ſtimulating, F. 846; fœtid attenuant, ibid.; purging, ibid; volatile fœtid, F. 851; ſpermaceti, F. 646; oily purging, F. 648, 649; aperient and purging antimonial, F. 370. 649; opiated cordial, F. 651; vitriolic, F. 652; terebinthinate, ibid.; volatile ſaline, F. 653; ſaline, F. 359; antimonial, F. 360; ſaline antimonial, ibid.; neutral volatile ſaline, F. 361; emetic, ibid; cordial, ibid; cordial aromatic, F. 364; cordial, with hot or cold infuſion of bark, F. 366; aſafœtida, F. 370.
Mixts, bodies intimately united one with another.

Morbid, diſeaſed ſtate.
Morbid fluidity, how occaſioned, 287, 288.
Morbific, creating diſeaſe, 138.
Morbilli. See Meazles.
Morbus comitialis, } ſee Epilepſy.
——— ſacer, }
——— puerilis, }
——— Herculeus, }
——— arquatus, } 718.
——— regius, }
Motion moderate, 286.
Moffat waters, 757.
Mortification. See Inflammation.
Mothers and nurſes, their ridiculous indulgence in feeding children miſchievous, why, 200.
Motion and heat, 277.
Moving powers of the conſtitution, what, 68.
Mucilaginous and oily ſubſtances, 288.
Mulberries, 211.
Mumps—ſingular peculiarity in this complaint, what, 507.
Muria, what, 135.
Muriatic, the acid of ſea ſalt ſo called, 300. F. 366, 367. 369; acid, vitriolic, 300.
Muſcle, what; its uſe, 8.
Muſcles and muſcular fibres, what, 68.
Muſcular irritability, what; its uſe, 17, 18.
Muſhroom, 263. 287.
Muſk, 229. 278. 282. 300. 301. 310. F. 364, 365.
Muſſels, 273.
Muſt, its effects, 117, 118.
Muſtard, 220, 221. 222. 252. 260. 263. 266. 302. F. 364.
Mutton-tea, its uſe, 112. 115. 201.
Myrrh gum, 218. 252, 253. 283. 300. F. 364. 366, 367. 369. 648. 651.

N.

Narcotic, 233. 250.
Naſturtium, 271. 294.
Natron, 297; vitriolated, or Glauber's ſalts, 265. F. 359. 654; tartarized, or Rochelle ſalt, 265. F. 360. 649.
Nephralgia, what, and whence named, 580.
Nephritis, what; whence ſo termed, 542.
Nerves, what; their uſes, 10.
Nervous affections, general idea of them, 655, 656; paſſive, the general idea, what, 609; their cauſes, 670; conſumption, ſee Atrophy; incitability, what; its uſe, 17, 18; ſyſtem, what; its uſe; medulla oblongata ſpinalis, 13.
Nettle, ſtinging, 211; in palſy, their uſe, 684.
Neutral ſalts, 287. 298. 301.
Nidorous,* 143.
Nidus, } 182.
Neſt. }
Nitre, 272. 275. 294. 299. 300. F. 359, 648. 654; æthereal, or ſweet ſpirits of, 272.
Nitrous acid, 300.
Non-naturals, what, 84. 87; Hoffman's opinion on their conſequence, 84; ſix, why reducible to four, 87.
Noſtrums, no dependence on the moſt extolled, 85.
Nucleus,* 583.
Nurſing, 167; bad, its effects, ibid.; children, half die under the age of five years, the reaſon aſſigned, 167; diſeaſe itſelf generated from bad nurſing, 168; diſpoſition ſoured by bad nurſing, ibid.; plain and ſimple, the beſt mode, in what it conſiſts, 169, 170; quadrupeds and birds, how brought up, ibid.; children, how to be managed as ſoon as born, 171; cold in new-born infants to be carefully avoided, why, ibid.; cuſtom of nurſing bad, how to be remedied, 171, 172; head ſwelled in labour, how to be managed, 172; rollers injurious in children new born, how, 173; how to be managed in this point, ibid.; dabs given to new-born children injurious, why, 174; caſtor oil and ſimple ſyrup the moſt proper, why, ibid.; purging, its effects in new-born infants, 175; reſt eſſentially neceſſary for both mother and child, why, 176; food proper for the mother at this time, what, ibid.; child early ſet to the breaſt, why, ibid.; ſuckling in good conſtitutions not to be diſpenſed with, why, 177; ſuckling alone not to be the only mode of feeding children, the reaſon, 178; children ſhould be fed once or twice a day, why, ibid.; ſubſtitute for breaſt milk, ibid.; bread, London common, improper food, ibid.; acidities to correct, 179; ſtomach never ſhould be overloaded, why, ibid.; child, when croſs, how to be appeaſed, ibid.; exerciſe proportioned to the age, what; its uſe, 179. 188; cold bathing, how uſeful, 180; rickets, one prevention againſt, ibid.; cold bathing, or waſhing all over with cold water, when to be avoided, how meliorated; ſhould be adapted to the nature of the conſtitution, why, ibid.; food, ſtronger, when neceſſary, and what kind, never given too hot, nor too ſweet, why, 181; children born ſickly, how managed, 182; magneſia, when uſeful, 183; management of infants, ſome rules relative to, 190; feeding weakly children, ſome caution neceſſary, 183; overloading the ſtomach injurious, why, ibid.; ſuckling not to be attempted by all, why, 184, 185; pre-

cautions neceſſary to be obſerved when children are brought up by the boat, 185. 187; nurſe, the ſelection of, rules to be obſerved, 186; nurſes, dieting of them, ſome obſervations upon, ibid.; exerciſe, which moſt eligible, 188; indolence, its effects, ibid.; air neceſſary; cleanlineſs alſo; filthineſs, its effects, how remedied, 189, 190.
Nutmeg, 220, 221. F. 368; ſpirit of, F. 361. 366; oil of, F. 363.
Nutrients, 197, 198; their action on living and inert ſolids, what, 217; their particular powers ſpecified, 198, 199. 206; their action, 217. 282. 291; the diviſion of them, 200; all of them reducible to one ſtate, how, 199.
Nutrition thrown into the habit too freely, why injurious, 135.
Nutritious liquids, what, 112.
Nutritive, ſtimulant and ſedative, 123.

O.

Oak and aſh bark, 212.
Oak bark infuſion, F. 640; bolus, F. 644.
Oaten bread, oat-meal, or that of wheat, infuſion of, 612.
Oats, 216.
Obtunders of acrimony, what, 290.
Odontalgia, what; from whence its name, 554.
Œdematous,* 75.
Œſophagus, what; its uſes, 37.
Oil and mucilage, their different modes of operation, 215; of burnt paper, rags, or wood, 789; mixed with opium, 808; in glyſters, 307.
Olive, 250, 295. F. 645; oil, 216. 306.
Oils, vegetable, mild, and animal, 263.
Ointment, mercurial, F. 849. 851; ſulphur, F. 850.
Omentitis, what; whence named; deſcription, 546.
Omentum, what; its uſe, &c. 35.
Onions, 221. 252. 271. 288. 295; boiled, 216. 273. 287.
Opiſthotonos, what; whence named, 656. 658.
Ophthalmia, whence the name, 495, 496.
Opiates, aſtringent, F. 645.
Opiated confection, F. 368. 651.
Opium, 233, 234. 250. 252. 275. 278. 310. F. 360. 370. 645. 647, 648, 649, 650, 651, 652. 655. 846. 849; taken in too large quantities, its effects, 234; ſaid to cure the venereal diſeaſe, its uſe here, what, 235; uſefully joined with aſafœtida, why, ibid.
Orange-peel, 223. F. 362. 366. 368, 369. 653; tree leaves, 665. 816.
Oranges, 294. 299.
Orrice-root, 241.
Organ, 50; a part of the machine by which ſome function is performed.
Organical, 12; conſiſting of various parts co-operating with each other.
Oſcillatory,* 102.
Os coccygis,* 46.
Oſſa iliaca, 44. 53.
Oſſa pubis, 57.
Os ſacrum, 46.
Orthopnœa, what, and whence named; ſee Aſthma.
Otalgia, otitis, what; from whence the name, 493. 552.
Ovaria, 62.
Ox-gall, how uſed in ſcrophula, 757.
Oxymel of meadow ſaffron, 230; of ſquills, 748; ſimple, F. 266. 845.
Oyſters, 273; and egg ſhells, their uſe, 296.

P.

Painful diſeaſes, 548.
Pains of the ear, ſee Otalgia;—*of the head*, ſee Cephalalgia;—*in the kidneys and ureters*; deſcription; cauſes; characteriſtic ſigns; cure, 580 to 583; who moſt ſubject to them, 580;—*of the liver*; deſcription; cauſes; cure, 574 to 578; who moſt ſubject to them, 577, 578; general characteriſtic ſigns, 580;—*in the ſide*; deſcription; cauſes; cure, 556 to 559;—*of the ſpleen*; deſcription; cauſes; cure, 579, 580; general characteriſtic ſigns, 580;—*of the ſtomach*; deſcription; cauſes; modes of cure, 560 to 566;—*of the teeth*, ſee Odontalgia.
Painters colic, 572.
Palm oil, F. 852.
Palſy, what, 656; different ſpecies, what; deſcription; cauſes; cure, 680 to 685; local, what, 680; ſucceeding the nervous colic, how relieved, 574.
Panacea,* 85. an univerſal medicine.
Pancreas, what; its uſe, 34.
Papillæ,* 55. ſmall eminences.
Par vagum, 34.
Paralyſis, what; whence named, 680.
Paraplegia, what; whence named, ibid.
Paraphrenitis, 519.
Parſley-ſeed, 271.
Paregoric,* 233.
Parſnip, 288. 295.
Pears, 294.
Pectoral decoction, 648.
Pellitory of Spain, 241. 556.

Pelvis, 55.
Pemphigus, what, 467.
Pennyroyal, 221. 223, 228. 250. 252. 283; water, F. 361. 365. 845, 846. 852.
Penis, what; its uſe, 64.
Pepper, 241.
Peppermint, 221. 223; water, F. 361. 363. 370. 651, 652, 653. 845.
Pericarditis, 519; cure, 521.
Pericardium * membrane, 19; inflammation of, 519; cure, 520.
Perichondrium,* 7.
Perioſteum,* 7.
Peripneumonia notha, what; whence named, 714.
Peripneumony, what, and whence named, 517; malignant, 520; deſcription; cure, ibid.; opiates, caution in their uſe, 521; ſpurious, different opinions concerning the ſeat, 714; deſcription; cauſes; cure, 714 to 718; uſeful caution reſpecting prognoſticating, 716; who moſt ſubject to it, ibid.; ſigns of death, 717; preventive mode, ibid.; how diſtinguiſhed from the true peripneumony, and dry aſthma, 717, 718.
Periſtaltic, 536; vermicular motion by which the bowels empty themſelves.
Peritonæum,* 29.
Peritonitis, what; from whence named, 546.
Permeability, open to be paſſed through.
Perriwinkle, 273.
Perry, 114. 116. 120. 300.
Perſpiration, inſenſible, how produced, 274.
Pertuſſis. See Hooping-cough.
Peru balſam, 221. 250. F. 652. 845. 852.
Petechiæ,* 347.
Peyer's, glands. 44.
Pharynx, 37.
Phenomena, 196. appearances.
Phlebotomia, what; its diviſion; general and local, their uſe and action, 190. 303; ſome caution in, what, 304.
Phrenitis, 519; how differs from paraphrenitis, 520.
Phthiſis pulmonalis, why ſo termed, ibid.
Phyſicians, ſelf-created, guilty of much injury, 72.
Pia mater, 17.
Piles, open, blind, diſtinguiſhed; when to be conſidered as a diſeaſe; ſometimes ſalutary, when; deſcription; cauſes; cure, 634, 635; aloetic medicines to be avoided, why, 637.
Pills, ſtimulant aperient, 845; ſaponaceous, 847; deobſtruent, ibid.; corroſive ſublimate, 850; gummous mercurial, ibid.; alterative mercurial, 647; purging, 362. 649. 651; aperient ſoap, 650; aloetic, ibid.; ſoap deobſtruent, 651; ſteel, 369.
Pimento, 221.
Pinguidinous ducts, 36. ducts conveying the fat.
Pitch ointment, 790.
Plaiſter, ſtimulant, 653; opiated, 651; hemlock, with ammoniacum, 849.
Pleurodyne, what; from whence ſo termed, 556.
Pleuriſy, what; and why ſo named, 512.
Plumbers colic, 572.
Podagra, what; whence named, 595.
Polychreſt ſalt, 285. See Kali vitriolated.
Polypi, coagulations or concretions of blood in the blood-veſſels, becauſe they ſend many ſmall branches into the adjacent veſſels.
Pomegranate, 212.
Poppy, 288. 291; ſyrup of, 233, 234; oil of, 250.
Pori biliarii, 32.
Porter, its effects, 116. 123.
Potatoes, 273. 288. 295.
Potters colic, 572.
Poultice, muſtard, 364.
Powder againſt the bite of a mad dog, 146; purgative ſerous, 847; calomel, 646; purging, 619. 646; opiated antimonial, 652; nitrated antimonial, 653; nauſeating, 653, 654.
Powders, nitrous, 359; antimonial, 360; aſtringent, 368.
Pox. See Lues venerea.
Præpuce, 65.
Pregnancy, 808.
Preſerving from, or curing diſeaſes, on what dependent, 4.
Privations, 669.
Prognoſtic, good and bad, ſpecified, 405.
Prophylactic, 124. preventive.
Prolapſus,* 794.
Propulſive, forcing forward.
Proſtatæ,* 65.
Proſtration, loſs or deprivation of.
Proximity, nearneſs.
Ptyaliſm, a continued diſcharge of ſaliva.
Pudendum, 60.
Pulmonic, belonging to the lungs.
Pulſe, deceptive in inflammation of the ſtomach, 534; of the liver alſo, 539.
Pulſatile, 493.
Punch, 114. 116.
Purge, cooling ſaline, 359; ſaline, 723.
Purging, whence it ariſes, 262; whence injurious, ibid.; acrid purgatives, their uſe, 281.
Puſtulous, full of matter, (pus.)
Putrid infection, its effects how prevented, 147; particles received into the habit, the effects by wounds how prevented, ibid.

Pyramidal muſcles, 59.
Pylorus,* 34. 38.
Pyroſis, what; whence named, 560. 566.

Q.

Quaſſia wood, 222. 271. 300. F. 369. 644.
Quickſilver, Boerhaave's opinion, and that of others, reſpecting its action, refuted; how it acts in this caſe, 243; its general action, what, 244; in its combined ſtate moſt active, leſs certain its effects, 245; not a ſpecific in the pox, ibid.; preparations of, different, appropriated to different purpoſes, 247. F. 849. 850, 851; white, precipitated, F. 851; applied in various modes may produce ſalivation, 243; vitriolated, or turpeth mineral, 260.
Quinces, 211. 299; the ſeed, 216; ſyrup, F. 366. 368. 655.
Quinſy, why ſo called; what, 500; tonſillary; tracheal; croup; pharingeal, 501. 506; parotideal; maxillary; mumps; branks, 501. 507; tonſillary, malignant, or ulcerous, 501; tonſillary, inflammatory, or common ſore throat; deſcription; increaſe of danger, from what cauſes, 502, 503; cauſes; characteriſtic ſigns; cure, 503; gargles, 504, 505, 506. 511. 648; when ſuppuration takes place, the ſymptoms, 504, 505; when quinſy ariſes from a paſſive cauſe, or relaxation, what to be done, 505; bronchotomy, under what circumſtances adviſeable; croup, what; how produced; method of treatment, 506, 507.

R.

Rachialgia, what, and whence named, 572.
Rachitis, what; whence its name, 832. See Rickets.
Radiſh, 271. 288. 295.
Raiſins, 216. 291. 294. F. 846.
Ramifications, ſmall branches.
Ranula. See Scrophula.
Raſpberry, 294.
Rattleſnake-root, 277.
Reaſons for giving the anatomy of ſome part of the machine aſſigned, 67.
Reaſons for publiſhing this work, 2.
Receptaculum * chyli, 11.
Rectum, what; its uſes, 46. 49.
Red globules, to what owing, 25.
Red precipitate, 246.
Regimen, a ſtrict adherence to, neceſſary, in preventing or curing diſeaſes, 85.
Regreſs, going back.
Regurgitation, ſwallowing back.
Relaxants, 213.
Remedies to be ſelected and appropriated to particular conſtitutions, 83; againſt too free drinking, 152.
Repletion and evacuation rather to be conſidered as diſeaſes under different circumſtances, 104.
Reſolution. See Inflammation.
Reſorbed, taking back.
Reſpiration, its uſe, 20.
Reſolving medicines, 284; their action, 286.
Reſtrictions neceſſary with reſpect to Celſus' directions for the conduct of men in health, 151.
Reſt or labour, after them running into the oppoſite extremes injurious, why, 157, 158.
Retina, nervous expanſion at the bottom of the eye.
Retention of the menſes. See Amenorrhœa. of urine, 584; deſcription; cauſes; cure, 585, 586.
Retroceded, going back.
Retropulſion, forced back.
Rheumatic affections removed by ſialagogues, 249.
Rheumatiſm, what, and from whence named; deſcription; cauſes; characteriſtic ſigns; modes of cure, 588, 594; acute and chronic, why ſo termed, 588, 589. 593; how alleviated or prevented, 141.
Rhubarb, 264. 266. 311. F. 362. 646. 650, 651, 652. 847. 850; infuſed in wine, 734.
Rickets, what, 832; deſcription, 833; the appearances on opening after death, what, 834; cauſes, ibid.; characteriſtic ſigns, 835; ſigns foretelling the approach of the diſeaſe, 837.
Riding not always ſalutary in conſumptions, 101; in a carriage; on horſeback, 274.
Rochelle ſalt. See Natron tartarizatum.
Rock oil, 229.
Roſemary, 221.
Roſes, &c. 211; ſyrup of, 266. F. 360. 362. 366, 367. 370. 647, 648, 649, 650, 651. 655. 846. 849.
Roſeolæ, Rubeolæ, 438.
Rue, 228; its particular properties ſpecified, 230. 283; attenuant, reſolvent, deobſtruent, 230; Boerhaave's opinion; Cullen's opinion, ibid.
Rugæ, folds.
Rye, 216. 289.

S. Sa-

S.

Sabine, 228. 280. 283. 306. 311; its properties ſpecified; Cullen's opinion; Home's experience, proof of, 230.
Saburra,* 131; from whence it ariſes; acid, how known and remedied; rancid, how known and remedied, 143; viſcid and ropy, how known and remedied, 75, 144.
Sac, 45.
Saccharine, 111. formed of ſugar.
Sago, its uſe, 111, 112. 288.
Sailing uſeful in conſumptions, 522.
Saline mixture, F. 360.
Saliva, 35.
Salivary glands, 35.
Salivation ſeldom neceſſary; if ſo, how to proceed, 779.
Salop, its uſe, 111. 114. 288.
Salt diſſolved in water uſeful in apoplexy, 674.
Salt, Epſom, 265. F. 363. 648, 649; fixed ammoniacal, 822; ſea, 285. 294. 306. F. 363. 649.
Salts, fixed alkaline, 264; earthy, 300; metalline, ibid.; neutral, 264. 300; purging, 310; volatile, 276. 293.
Sarſaparilla, 278. F. 647.
Saſſafras, 221. 274. F. 647. 851.
Saturated, fully impregnated.
Saturnine colic, 572.
Sauces, acid or ſour, why united with high ſeaſoned diſhes, 100.
Savory, 241.
Scald-head. See Tinea.
Scammony, 264. 267. 306. F. 651.
Scarifications, cautions relative to, 730, 731.
Scate oil, 836.
Sciatica, 588.
Scirrhus. See Inflammation.
Scollop, 273.
Scorbutic juices, 137.
Scordium, F. 645.
Scrophula, what, and whence ſo termed, 751; fixing on different parts differently named, which, ibid.; where fixing improperly called ſcirrhus, ibid.; does not always occupy the glands, ibid.; whether contagious or not, doubtful, ibid.; cauſe of conſumption, &c. how, 752; when fixed internally, the ſymptoms, 753; when apt to become cancerous, ibid.; beſt in external applications, 758; how to be prevented, 79. 142.
Scrotum, 63.
Scurvy, deſcription; divided into three ſtages, 744, 745; cauſes, 746; characteriſtic ſigns; cure, 747; epidemical in Hampſhire, though neither infectious nor contagious, 744. 746; why, 747; vegetables, how to be uſed, 749; putrid, how prevented, 141.
Sea air; bathing; water, how taken in ſcrophula, 755, 756; wrack, how uſed in ſcrophula, 757; water, 666.
Secretory veſſels, what; their uſe, 11.
Sedatives, 197; what; their action; the preciſe mode, little to be ſaid about; attempted to be explained, 231; as relaxants, how, 214; their general ſympathetic and local action proved, 231, 232; catalogue; appellations of, different, why, 233. 291. 297. 300; act not as common demulcents, why, 292.
Seltzer water, 628.
Seminal veſſels, 632.
Seneka, 277. 382.
Senna, 264. 266. 310. F. 362. 370. 650, 651, 652. 846.
Seroſity, from ſerum, the thinner part of the blood.
Senſorium, organ of ſenſation.
Serum, what, 24.
Setons, 302.
Sheathing liquids, what; their uſes, 111.
Shingles, 465.
Sialagogues, 197; what; their action and uſes, 242; divided by authors into three claſſes, ibid; claſſes what, ibid.; obſtruction in ſome parts prove ſialagogues, ibid.
Simarouba, or Guiana bark, 212. F. 654.
Skirret, 288. 295.
Sinuſes of the brain, 17.
Sleep, properly proportioned, neceſſary to be obſerved; its uſe, 163; the period of indulgence different in different conſtitutions, how hurtful; reſult of indolence, ſhould be remedied, how, 164, 165; in the day often, though not always, wrong, why, 165; and wakefulneſs, their uſe, 103, 104; the time neceſſary, adapted to different ages, 104.
Sloes, 211. 299.
Small beer, its uſe, 111.
Small-pox, or pocks, whence ſo called; variola, whence ſo called; how divided, 413; its different ſtages; deſcription; mild ſpecies, 414; ſecondary fever of the ſmall-pox, how formed, 415. 424. 425; confluent, the fever, of what nature; the ſymptoms of each, 416, 417, 418; one ſpecies why called dyſenteric, 418; cauſes; characteriſtic ſigns; cure, the indications of, 419; medical conduct to be regulated by the nature of the conſtitution and nature of the fever, 420, 421, 422, 426; particular occurrences, what; how relieved,

lieved, 423; opening the eruptions, as adviſed by ſome, dangerous, why, 425, 426; eruptions, different appearances of, ſpecified, 426, 427; and modes of alleviations; alvine fluxes, much nicety required in their management in febrile complaints, why, 427; diet always to be adapted to the nature of the fever, why; omens in the ſmall-pox, good and bad ſpecified, 428, 429;—inoculated, the advantages of, ſpecified, 430; the operation deſcribed; ſubjects proper for inoculation, whom; and the beſt period with reſpect to age and ſeaſon, 431. 434; preparation, modes of, in different conſtitutions; the advantages, what, 432; matter, from what patients the moſt eligible to take it; deſcription, 433; unfavourable ſymptoms, 434; favourable ſigns, 435; cauſes; cure; Clutton's febrifuge ſpirits, 436; expoſure to cold air to be regulated by circumſtances, 437.

Smoke of burning feathers an efficacious remedy, 813.

Snake-root, 221. 277. F. 362. 365. 366. 644.

Soap, 273. 287. 297. 308. F. 651. 653. 847; ley, 308; liniment, F. 650.

Soda, 297.

Solids, what, 6; living, 12. 14; inert, 12. 14; and fluids variouſly divided, 5.

Somnolency, ſl epineſs.

Sore throat, malignant ulcerous, or malignant ſcarlet fever, 508; cauſes, 510; deſcription, 508; whom it moſt commonly attacks, ibid.; characteriſtic ſigns, 510; ought to be diſtinguiſhed from the ſimple inflammatory ſore throat, by what means, and why, ibid.; favourable omens, ibid.; unfavourable, 511; cure; bleeding to be avoided, why, ibid.

Sorrel, 294, 295.

Solution, corroſive ſublimate, 849; mercurial gummous, 850; vitriolic, 648; aperient cooling, 654; of cream of tartar, 730.

Soups, their uſe, 112. 122.

Solvents of the ſtone. See Lithontriptics, 307.

Spaniſh flies, 302. cantharides, F. 846.

Spaſm, what, 656; and convulſion, the difference, what, 225.

Spaſms ariſing from different cauſes, by what removed, 226.

Spermaceti, 216. F. 646.

Spermatic blood veſſels, 62.

Sphincters,* 9.

Spinage, 216. 263. 287. 294.

Spirits, ardent, 114. 116; Britiſh, F. 851.

Spitting of blood. See Coughing up of blood.

Spleen, what; its uſes, 36.

Splenalgia, what; whence named, 579.

Splenitis, what; why ſo termed, 541; inflammation of the ſpleen; deſcription; cauſes; characteriſtic ſigns; cure, 541; abſceſs formed here deſtroys ſuddenly, why, ibid.

Spruce, 748.

Stratum,* 39.

Sphacelus. See Mortification.

Struma. See Scrophula.

Spunge, burnt, 755.

Spurge olive, or mezereon, 278.

Sputatores, what, 819.

Squills, 248. 250. 252. 260. 272. F. 648. 845. 847. 849.

Staff, 584.

Stamina, the ſolids of the human body.

Statical, the ſcience of weighing.

Starch, 288. 291.

Sterne's æther, 523.

Sternum,* 26.

Sternutatories, 238. 250.

Stimulant and ſedative liquids, what, 114.

Stimulants, 238. 297. 300; their action, 218; oſcillatory, 218; direct and indirect, their action ſpecified, 218; divided into three claſſes, general, local, mental, why; why a different diviſion from their uſes, 220; catalogue of; their different powers, 221; thoſe of the ſtronger claſs weakened, 274; mild, ibid.

Stomach, what; its uſe, 38; indiſpoſed from drinking, how relieved; only to be applied to on particular occaſions, the reaſons, 153; its great power over the ſyſtem, one proof of, ibid.

Stomachics,* 135.

Stone in the bladder, deſcription; cure, 583, 584; the only certain mode of diſcovering it, what, 584;—*in the kidneys*, 580; in the kidney may be lodged without pain, what produces it, 581; alſo in the bladder, 583.

Straight gut, 46.

Strangury, what; whence named, 584; deſcription; cauſes; cure, 586, 587.

Strawberries, 294.

Styptic powder, F. 368.

Sublimation, raiſing up ſolids and hard bodies by the force of fire.

Subclavian vein, 96.

Succory, 263.

Succulent,* 630.

Suet, 216.

Suffocating catarrh, not to be confounded with the croup, why, 713; their difference

hence pointed out, ibid.; deſcription; characteriſtic ſigns; cure, 713, 714; ſometimes it is epidemical, and often fatal ſuddenly, 714.
Suffuſio bilis, 718.
Sugar, 263. 291.
Suppuration. See Inflammation.
Sulphur, flowers of, &c. 263. 265. 306. F. 654. 850; drink for preventing or mitigating the gout, 140; its action on the habit, ibid.
Sulphureous medicines mixed with alkalies, 250.
Suppoſitory, 649.
Suppreſſion of the menſes. See Amenorrhœa; of urine, 584; deſcription; cauſes; cure, 585, 586.
Suture, thoſe places where the bones of the ſcull are joined.
Sweat, morbid evacuations of. See Ephidroſis; what to be obſerved when we want to promote it, 275, 276.
Sweet-bread, 34.
Swinging in the open air uſeful in conſumptions, 528.
Sympathy,* or ſympathic affections, 69.
Symptomatic,* 469.
Syrup, gummous mercurial, 850.

T.

Tabes dorſalis, what, and whence named, 531; cure, 532.
Tabes, whence ſo termed, 529; its different cauſes; deſcriptions, 529, 530; cure, 531.
Tamarinds, 263. 294. F. 363. 367.
Tanzey, 306.
Tapioca, its uſe, 111. 114.
Tapping not to be deferred too long, why, 732; fainting, how prevented, 733.
Tartar, 264, 265; ley of, 851.
Tartarized antimony, 259. 310. F. 360, 361. 363. 646. 649, 650; wine of, 259. 278.
Tartar, ſoluble, 297.
Tarſi, edge of the eye-lids.
Tar water, 748.
Tartar, cryſtals of, 272. F. 363. 367. 847.
Tea, beef, 201; mutton, ibid.; and coffee drank too hot, the evil conſequences of, 116; hot, its effects, 214; its uſe, 111.
Temperance, what meant by the term, 605.
Temperament, conſtitution, 108.
Teneſmodal, dyſenteric inteſtinal flux, 615.
Tendons, what; their uſe, 9.
Terra ponderoſa muriata, 791; its action, 757.
Terreſtrious,* 56.
Teſtaceous powders, 275; animals, 273. 296.
Teſtes, what; their uſe, 63.
Teſticles, ibid.
Tetanic,* 130.
Tetanus, what; whence named: deſcription; cure, 656 to 661; warm bathing, how to be managed, 659; cold bathing, its uſe, 660; in tetanus oppoſite methods being ſucceſsful, how accounted for, 660.
Tetters, 782, 783; indications of cure, 786; cure, 788.
Thirſt in dropſy, how alleviated without drinking, 732.
Thoracic duct, 11.
Thorax, or breaſt, 26.
Theroid glands, lymphatic glands on the lower part of the windpipe.
Tin powder, 306.
Tincæ os, 60.
Tinea, what; why ſo called, 783, 784; deſcription, ibid.; who moſt ſubject to it, 785; on what it depends, 786; indications of cure, ibid.; characteriſtic ſigns; cure, 789; ſome appearances in theſe children, what, ibid.; cautions relative to external applications, 790.
Tincture of bark, with lime water, 849.
Tobacco, its powers ſpecified, 234. 237. 248. 259. 271; extract, 711; ſmoke, 252; ſnuff, 241; in Sweden why given; uſed alſo in Germany, for what; recommended here, for what purpoſes; not been brought into practice, why, 238.
Tone, activity with ſtrength.
Torpor, ſluggiſhneſs, inactivity.
Tooth-ach, errhines uſeful, 240; relieved by ſialagogues, 249; cauſes; ſeat; modes of cure, 553, 554, 555.
Tormentil-root, 211.
Triſmus, what; whence named, 657, 658.
Tragacanth, gum, 288. 291.
Tubæ Fallopianæ, 61.
Tubercles,* 54; alſo ſmall tumors often found in the lungs.
Tubuli, ſmall tubes.
Tulpii valvula, 46.
Tunica vaginalis, 63.
Tunica albuginea, ibid.
Turgeſcence, ſwelling.
Turnip, 271. 288. 295.
Turpentine, 221. 271. F. 652; oil of, 300, 301. F. 652; balſam of, 250.
Turpeth mineral, 241. 246.
Tuſſis, 697.
Tympanitis, what; whence named, 740.
Tympany, divided into two ſpecies; deſcription; cure; its characteriſtic ſymptoms, ibid.

U. V.

Ulcers upon the legs from rheumatic affections, not to be dried up, why, 592.
Umbilicus, 44.
Ureters, what; their uſe, 57.
Urethra, what, 65.
Urine, morbid diſcharge of. See Diabetes.
Urine, bloody, its different appearances; cauſes; cure, 632 to 634; two points to be conſidered, what, 632; blood mixed uniformly with the urine, how diſcovered, 634; ariſing from different cauſes, gonorrhœa, piles making that way their exit, or being critical, it ſhould be diſtinguiſhed, 634.
Uriniferous, 55. veſſels conveying urine.
Uterus, what; its uſes, 59.
Uva urſi, 308.
Vagina, what; its uſe, 60.
Valetudinarians, rules for reſpecting the quantity of food to be taken, 200.
Valerian, 229. 250. F. 364. 845.
Vapour, 216; of an animal recently killed, ibid.; bath, 749; ſtimulant, 281; warm, 275; particularly of water.
Varicoſe,* 759.
Vas deferens, 64.
Vaſcular ſyſtem, what; its uſe, 13.
Valves, 11. a contrivance in the veſſels and other parts, which ſtops the return of any fluids which paſſes through them.
Valvulæ conniventes, 44.
Veal tea, its uſe, 112.
Vegetable acid, 294; alkali impregnated with fixed air, 308; bitter, acrid, highly flavoured, how claſſed, 206; cooling decoctions, 723; nutrients, 300; and native acids, 279.
Veins, what; their uſe, 10.
Vena cava, 21. 42; portarum, 30.
Venereal virus, its effects, how prevented, 145.
Venice ſoap, 250. 263. F. 649, 650; treacle, F. 848.
Ventricle,* 38,
Ventricles of the brain, 11. See Brain, 17.
Vermicular, 47. ſerpentine, or worm-like.
Vermifuges. See Anthelmintics, 305; Boerhaave's diviſion, 305; diviſion of them into ſeparate heads, 306.
Vertebræ, 17. 34. back bone.
Vertiginous, giddy.
Veſſel, what; how formed, 10.
Veſicatories. See Epiſpaſtics.
Veſica fellis, 28. gall bladder.
Vibices,* 347.
Villi,* 40.
Vinegar, 117. 119. 250. 275. 295. 300. F. 364. 368. 647, 648. 650; applied to the noſtrils and temples, its uſe, 813; and ginger, Helmont's opinion, 276; camphorated, 368; ſweetened with honey, 275.
Viper, the effects of its poiſon, how prevented, 145; fleſh; broth, 792.
Viſcera, 20. the chief contents of the head, cheſt, and belly.
Virulent muco-puriform gleet. See Gonorrhœa virulenta.
Vitriol blue, or Roman, 210.
Vitriolic acid, 294; æther, ſpirit of, F. 360.
Volatile alkaline ſalts, 220, 221, 222. 250. 302. 311; oily ſoaps, 250.
Volatiles and aſtringents judiciouſly united, in what caſes, 209.
Vomiting of blood; characteriſtic ſigns; cauſes; cure, 630 to 632; to whom moſt common, 630; womens's menſtruating a cure, 630; in pregnancy rarely injurious, in fevers fatal; when affording little hope, 632.
Vomica, deſcription of, 521; cure, 523.
Vomicæ, 834.

W.

Wake-robin, 221. 224. 271; electuary of, 224. F. 848.
Walking, 274.
Water, 273. 279. 286; its uſe, 110; cold, 275; warm, ibid.; drank copiouſly, 263; the only diluent, its effects; from whence, 284; braſh. See Pyroſis; dock, 211. 295; pox, deſcription, 446.
Watery vapours received into the lungs, 252.
Ward's eſſence, 551.
Wedge thruſting between the teeth, its uſe in epilepſy, 667.
Wheat, 216. 289.
Whey of cryſtals of tartar, 363; antiſeptic, 367; milk, 273; muſtard, 653; alum, 654.
White flux. See Cœliaca.
White hellebore, 241.
Whites. See Leucorrhœa.
White lily-root, 286; poppy, 216; vitriol, 210. 259. 311. F. 648. 849.
Wild vine, 272.
Wind, the ſtrongeſt ſymptom in colic, how known, 568.
Windpipe, what, 20.
Winds, the moſt ſalutary, which, 92.
Wine, 114. 116, 117. 220, 221. 250. 279. 288. 295. 300.
Wine acids, aſtringents, uſed as inſpiſſants, why,

why, 289; of what compoſed, 117; medicated, 848; oil, ſaline and ſome earthy ſubſtances as diluents defective, why, 285; pure, what, 117. 119; ſpirit of, its effects, 118; compoſition, under that name, what, their effects, ſold, 120; Rheniſh, 276.
Wines, auſtere, 274.
Womb, 59.
Wood ſorel, 211.
Woods, decoction of, 137.
Worm medicines. See Anthelmintics, 305; ſeed, 306.
Worms, 557, 558.
Wormwood, Roman and common, 228. 300. 301. 847.
Wort, 848.

X.

Xyphoid, or enſiform, 561.

Z.

Zedoary, 222.
Zinc, &c. 210, 211.
Zona, Zoſter, 465.

FINIS.

CORRIGENDA.

Page 19, line 15, for "caſe" read "cauſe."
—— 20, —— 10, for "dilutable" read "dilatable."
—— 44, —— 29, for "or" read "above the."
—— 130, —— 12, dele "or convulſions."
—— 177, —— 3, after ſucking put (,)—after milk, dele (,).
—— 180, —— 13, inſtead of "exerciſing" read "increaſing."
—— 187, —— 26, for "reſembles" read "reſemble."
—— 252, —— 6, inſert "ſquills."
—— 265, —— 12, for "Kali" read "Natron."
—— 280, —— 14, for "requires" read "require."
—— 280, —— 15, for "acid" read "aid."
—— 291, —— 5, for "acid" read "acrid."
—— 296, —— 27, for "Eggs" read "Eyes,"
—— 316, —— 3, for "is" read "are."
—— 335, —— 30, } for "fluids are alſo poor and thin" read "blood alſo
—— 336, —— 1, } "poor."
—— 382, —— 24, for "aids" read "aid."
—— 386, —— 21, dele "of."
—— 414, —— 8, inſtead of "thoſe" read "ſymptoms."
—— 483, —— 1, dele "to."
—— 524, —— 12, after "expectoration" read "are paſt."
—— 541, —— 10, for "appearance" read "attack."
—— 552, —— 16, for "their" read "thin."
—— 559, —— 24, for "566" read "556."
—— 566, —— 17, after "65" read "exhibited."
—— 591, —— 27, for "but," read "beſt."
—— 592, —— 20, dele "dopped."
—— 603, —— 11, for "to" read "which."
—— 617, —— 24, for "afrance" read "appearance."
—— 653, No. 126, add "Pennyroyal Water, 6 ounces."
—— 706, line 13, for "humid, and ſpaſmodic; or" read "humid; and "ſpaſmodic, or"
—— 781. —— 24, dele "ſtate of."
—— 782, —— 5-6, dele "of this complaint."
Index 9, —— 11, 2d column, for "correctors" read "not correctors."