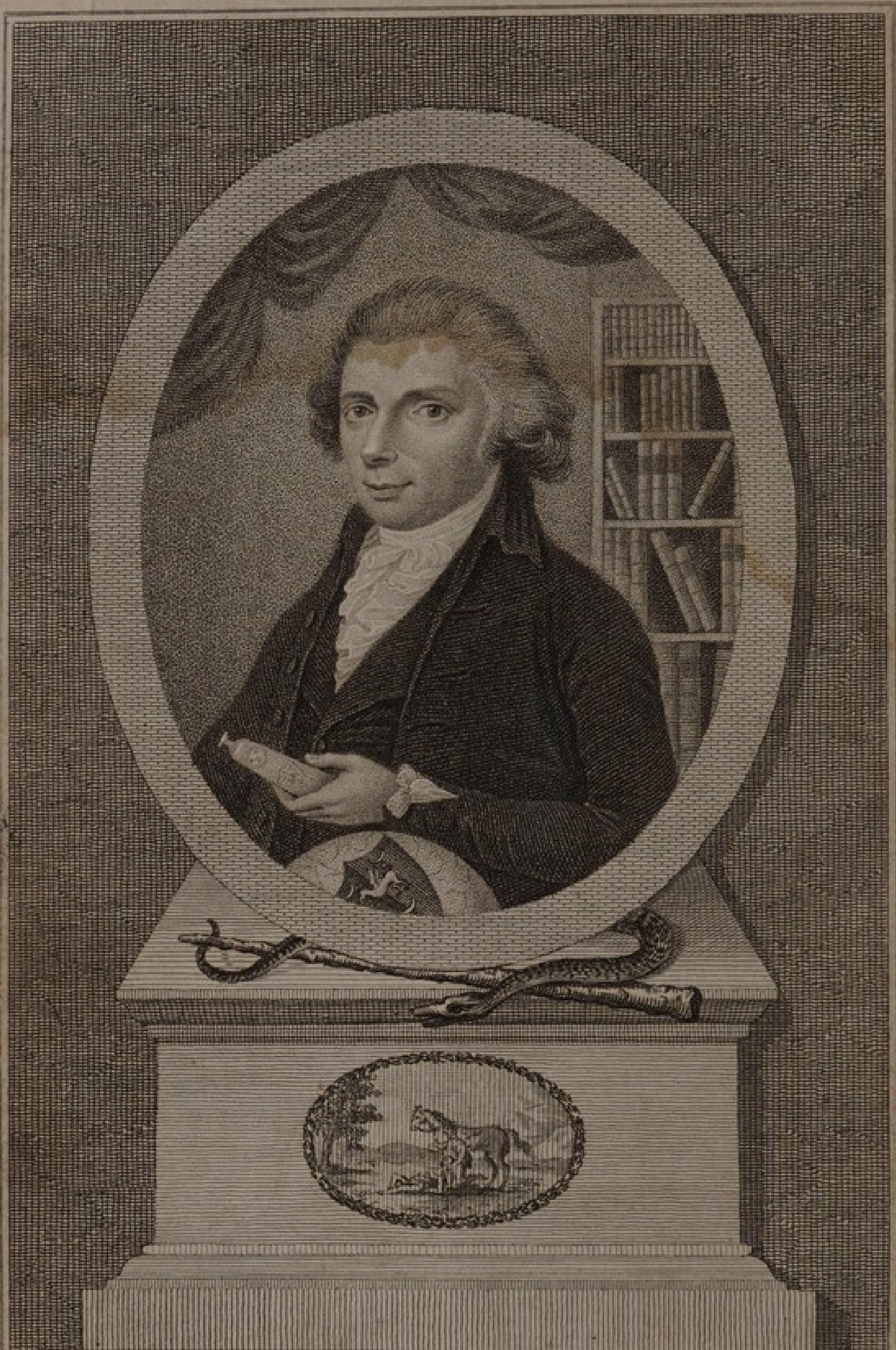
The medical mirror, or, Treatise on the impregnation of the human female : Shewing the origin of diseases and the principles of life and death.



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E. SIBLY, M.D.
FRHS

THE MEDICAL MIRROR.

OR

A Treatise on the Impregnation of the HUMAN FEMALE.

Shewing

The Origin of Diseases

And the Principles of

Life and Death

By EBENEZER SIBLY, *M.D.*

New Bridge Street, near St. Paul's.

A New Edition with large Additions.

(And Anatomical Plates.)

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TO THE

PRESIDENT,

PROFESSORS,

AND ALL THE MEMBERS

OF THE

ANCIENT AND ROYAL FOUNDATION,

King's College,

ABERDEEN.

GENTLEMEN,

YOU have been the means of foſtering my humble endeavours to perform that exalted duty practiſed by the good Samaritan, of healing and ſuccouring the afflicted.

You have dignified me, by your approbation of my reſearches into the Eſculapian art, and by conferring on me that Academic Honour, beſtowed only on the ſtudious.

Permit me then, in the moſt unreſerved and moſt reſpectful manner, to lay before you the

reſult

reſult of thoſe ſtudies, the happy diſcovery of a Medicine, which, it is hoped, may advance a long wiſhed-for deſideratum in phyſic.

In ſtriving to poſſeſs the godlike principle of relieving nature, and expelling diſeaſe, I have only done that part which my ſituation enjoined, but which your countenance ſanctioned. I am happy in evincing, by aſſiduity in my profeſſion, my gratitude to you; and I ſhall always be ambitious to approve myſelf, with due deference,

GENTLEMEN,

Your moſt obliged,

And moſt obedient,

Humble Servant,

EBENEZER SIBLY.

No. 40, NEW BRIDGE-STREET,
near St. Paul's, London.

PREFACE.

IN this MIRROR, every patient may behold, not only the true picture of his own diſorder, whether hereditary or accidental, chronical or acute, but may alſo perceive the direct and obvious road to an immediate cure; particularly in relaxed and debilitated conſtitutions; in lowneſs of ſpirits, and weakneſs of nerves; in ſcroſula, rheumatiſm, and gout; and in all complaints which have their ſource in a tainted or corrupted ſtate of the blood, in vitiated lymph, or in ſpaſmodic affections of the nervous fluid irritating the muſcular ſyſtem, the brain, and vital organs of the human machine.

The tender and bluſhing female, whether married or ſingle, may here diſcern the admirable ſtructure of her frame, and its natural indiſpoſitions, with ample directions how to conduct herſelf, without wounding her delicacy by communicating her ſymptoms, her fears, or her apprehenſions, to the rude ſcrutiny of pretended friends.

The country doctor, and profeſſional accoucheur, if he dare diveſt himſelf of pecuniary views, and the affluent lord or lady of the manor, if ſtored with benevolence of heart, may here view a ready means to ſtop the anguiſh of the tortured patient, and to relieve the poor diſeaſed huſbandman, whoſe avocation ſubjects him alike to the ſeverities of all ſeaſons, and that infinite variety of ſickneſs ariſing from alternate cold, heat, fatigue, and

want

want of proper food and clothing, which is every where felt among our village poor.

Above all, the brave and generous uncomplaining ſeaman, who, ſubjected to the ravages of the ſcurvy, yet cheerfully braves the thunderbolts of war, and in ſpite of winds and waves, keeps from our peaceful ſhores the devaſtations of hoſtility; the poor unprotected ſoldier, alſo, who ſhrinks not from the ſanguinary charge, but, regardleſs both of danger and death, bleeds in his country's cauſe, are ſurely the firſt objects of medical care and comfort. Their perilous ſituation in the doubtful chance of war, powerfully ſolicits us in their favour, draws out our compaſſion to feel for their ſufferings, melts us at every new picture of their diſtreſs, and urges us to ſearch out the balmy oil *of the good Samaritan, to heal their bleeding wounds. In this Mirror ſuch a balm is diſcovered; which, if applied in time to gun-ſhots, ſtabs, and wounds, may be the means of preſerving to their relatives and friends, ſome thouſands of valuable members of ſociety.*

THE

Medical Mirror.

OF THE HUMAN IMPREGNATION.

IN the exercise of our three-fold duty, to God, to our neighbour, and to ourselves; in contemplating the works of creation, and the Word of God, unfolded to us by the light of reason and scripture; by analogy, medical experiments, chymistry and anatomy, we are enabled to trace the human economy farther in her retirement, and deeper in her occult retreat, than some *medical* men are willing to suppose.

Impoverished by a fashionable style of living, and driven to a necessity of multiplying potions and fees, their object is not to heal, but to nourish the seeds of human infirmity. The truth of this remark has been but too often experienced, and indeed CONFESSED by some, in those awful moments when dissimulation would be vain. Far be it from me to arraign the professional character in its general capacity; it is only the medical locusts that I wish to eradicate; and I am persuaded every good man in the faculty would with heart and hand assist me in so laudable a pursuit. It was principally with this view, and to assist private families in the moments of extremity, that I was induced to offer those simple modes of cure and self-preservation,

ſo amply diſpenſed in my edition of the Family Phyſician: and my preſent purpoſe being to make that book ſtill more complete, I ſhall here explain the nature of human generation, and the true principles of animal life, that I may from thence deduce the origin of hereditary diſeaſes, and point out, with more facility, thoſe which are accidental. In this Treatiſe alſo, I ſhall endeavour to furniſh my readers with ſuch obvious directions for *eſchewing the evil, and chooſing the good*, which, if reſolutely followed, will not fail to preſerve health and long life, and prove of no ſmall benefit to future generations.

When GOD created Adam, he made a ſummary of the world's fabric, an abſtract of the divine nature: in man he ended his work: on man he ſtamped his ſeal, and the ſign of his power; and imprinted on him his own image and ſuperſcription, his enſign, and his portraiture. GOD ſaid, "*Let us make man in our own image, after our own likeneſs.*" In the creation of man, GOD ſeemeth to deliberate, and take counſel with Himſelf*, how to epitomize and gather together all his works into ſo ſmall a compaſs;---to contract his vaſt book of creation into ſo minute a volume. Man is called the microcoſm, or little world; the recapitulation of all things; the ligament of angels and beaſts; heavenly and earthly; ſpiritual and corporal; the perfection of the whole work, and the honour and miracle of nature! In him was alſo planted ſeeds of that divine eſſence requiſite to propagate the human LIFE

* The three principles of the Divine Eſſence, in which Eſſence these three principles are united. Theologiſts call them Father, Son, Holy Ghoſt. The Naturaliſt, Matter, Spirit, Motion. The Chymiſt, Salt, Sulphur, Mercury. The Anatomiſt, Body, Blood, Spirit. The Botaniſt, Subſtance, Fragrance, Sap. But the Philoſopher comprehends them all, and ſearches out this Triune Power, THIS FIRST GREAT CAUSE, from the animal, vegetable, and mineral kingdoms; and with his intellectual faculties ſoars into the ætherial regions, and exclaims, with David: "I am fearfully and wonderfully made!"—"Whither can I go from thy Spirit?" Pſal. cxxxix. 7, 14.

and

and SOUL. Theologiſts may contradict me, yet I will not ſo much derogate from the wiſdom and omnipotence of the Creator, as to ſuppoſe he ſhould watch the impregnation of every human female, and by ſo many ſeparate and diſtinct acts of his power, give life, ſpirit, and ſoul to the fœtus. The Creator of man, viewing with unbounded foreſight the purpoſes before him, by one act of his omnipotence, blended in this firſt man all the faculties of the human and celeſtial nature; and, without any doubt, when he was formed *one*, in GOD's expreſs *image*, he poſſeſſed the means of propagating, from his own eſſence, beings like himſelf. It is here difficult to aſſociate the imperfect ideas of human reaſon with the mechaniſm of Divine wiſdom; and yet our conceptions may in ſome degree unravel the myſteries of nature, by cauſes and ſpeculations, which, in proportion as they captivate our ſenſes, and raiſe our admiration, excite in us a reverential awe of futurity, and a grateful ſenſibility of the goodneſs and mercy of him who gave us being.

From the evidence of ſcripture, it is indiſputably clear, that in the perſon of Adam the male and female properties were originally combined *; as indeed we now find them in many ſpecies of the lower claſs of animals; conſequently the expreſſion of *male* and *female* does not neceſſarily imply two diſtinct bodies. In Geneſis, i. 27, we read, that *GOD created man in his own image*, i. e. of perfection; including or containing the prolific or generating powers, which are diſtinguiſhed by the expreſſion of *male* and *female*; and *GOD bleſſed them*, i. e. theſe male and female properties, *and ſaid unto them, Increaſe and multiply, and repleniſh the earth*, i. e. with beings like Adam; for

* Man being compoſed of three eſſences and four elements, had the active principle of COLD and HEAT, and paſſive principle of DRYNESS and MOISTURE, inherent in himſelf.

this benediction, and this command, were *antecedent* to the formation of Eve, as every one muſt know who reads the firſt and ſecond chapters of Geneſis.

In this *plural* capacity, therefore, Adam received the bleſſing of GOD, when he ſaid unto him, *Be fruitful and multiply, and repleniſh the earth, and ſubdue it; and have dominion over the fiſh of the ſea, and over the fowls of the air, &c.* The ſix days' creation was now completed; and on the ſeventh day GOD reſted from all his work; and having formed Adam, and breathed into his noſtrils the breath of life, *he became a living ſoul.* GOD alſo planted the garden of Eden, and put the *man* into it, to till it, and to dreſs it; and GOD commanded the *man*, ſaying, *Of every tree of the garden thou mayeſt freely eat; but of the tree of the knowledge of good and evil, thou ſhalt not eat of it; for in the day that thou eateſt thereof, thou ſhalt ſurely die*, Gen. ii. 27.

Let us here remark, that all theſe tranſactions, injunctions, and commands, had paſſed *before Eve was formed*, or, in other words, before the male and female eſſences were ſeparated and made the eſſential parts of two diſtinct perſons. Adam likewiſe, before this event took place, was appointed GOD's viceroy over all earthly things, both animate and inanimate; the very elements being made ſubject to him; for *he was formed more noble than the angels, and crowned with glory and honour*, i. e. having the peculiar advantage of *multiplying his own race.* He was, as to his external form, moulded of celeſtial æther; conſequently created upright, ſcarcely touching the earth, and quite oppoſite to the *vegetable plant*, whoſe root is therein fixed; far different alſo from the BEAST, who is a mean between a plant and himſelf, and goeth downwards, his two extremes tending to the bounds of the horizon; this upright gait belonging

only

only to the human ſpecies, as the holieſt and moſt divine creature; his head elevated toward the heaven, on which he looks, and contemplates, with grateful adoration, the omnipotence of the Creator; he was formed naked, being pure; delicately made of thin ſubtle well-tempered and ſeaſoned humours, and, previouſly to his fall, his body emanated rays of brightneſs and ſplendor *, ſimilar to thoſe which our ideas furniſh of Moſes and Elias, when they converſed with GOD. His reaſoning faculty, and *living ſoul*, were formed of the *eternal* eſſence or tincture of the Divinity; being nothing elſe than what is termed the *breath of GOD*, that ſpark of immortality which generates the *ſoul*, and is the diſtinguiſhing characteriſtic between man and beaſt. For, although brute animals inherit the five ſenſes, and poſſeſs an inſtinct to direct them in the choice of food, and to impel the propagation of their ſpecies, yet theſe are only ſenſes formed from the *outbirth*, or four elements of nature; and not from the *tincture* of the Divinity, the *eſſence* or *centre* of *nature*, out of which the ſoul, the mental intellect, reaſon, ſenſe, and underſtanding are all formed; for man was endowed by his mind to penetrate into the eſſences of all things, comprehending, at one view, its origin and property, and to make a tranſfer of the ſame to poſterity. "*For with the powers which GOD has endowed man, with the ſame powers ſhall he multiply his race.*"

From the foregoing paſſages we are warranted to infer, that the original man was poſſeſſed of his ſpiritual ſoul, and rational intellect, for the purpoſe of propagating their intellection to all future generations. By the force of this rational intellect, or eternal ſpirit, unclouded by the deformity of ſin,

* An aſtoniſhing difference between ſhe weak and groſs inſenſible perſpiration now and then; may we not ſay with the prophet, "How is the gold become dim! how is the moſt fine gold changed!" Lament. iv. verſe 1.

he

he knew and perceived the nature and property of every animated being; and to exercise this intellect, GOD brought before him every created thing, to see what he would call them; *and whatsoever Adam called them, that was the name thereof.* He knew and perceived the nature and quality of all animals; and according to their designation and subjection to the external elements, so he assigned them those characters which they have ever since borne. Adam, however, in his primeval state, was not himself under the influence or power of celestial or terrestrial elements; but, on the contrary, they were subject to his control. He was immortal; they corruptible. They sprang out of time, and were elemented; he sprang from the limbus of eternity; and into eternity the divine essence, or soul, propagated from him, must indisputably return.

But man, thus created in honour and immortality, abideth not. The purpose of his creation was to fill the place of the rebel angels; and hence Lucifer became his mortal foe. This fallen spirit had entered the gate of Eden, and was preparing to seduce Adam, when the Almighty constituted the test of his obedience; for having endowed him with a *free will*, an innate power of choosing *good* or *evil*, and of multiplying his specie, it was but reasonable to expect from him an implicit obedience, and an angelic race. He that is alone eternal and omnipotent, could not but foresee the subsequent event; and it is his supreme goodness to counteract evil, by preventing its worst consequences. Foreseeing that the prolific tincture, or eternal essence of fecundation, might be contaminated by the malignant spirit of Lucifer infusing itself into the mind of Adam, who then, instead of multiplying an angelic race, would generate devils; and that were man to fall in this plural capacity, there was no counterpart, no feminine principle, through the medium of

which

which the *ſerpent's head could be bruiſed*, or a Saviour become incarnate:---on a further ſurvey therefore, after the works of creation had been completed, animals named, and man formed and compounded of the male and female tinctures, GOD ſaid (Gen. ii. 18) *It is not good that the man ſhould be alone; I will make him an help meet for him;* wherefore the rib, i. e. the *feminine* or *conceptive* eſſence, the SOFT, MILD, and LOVING principle, was taken out of Adam, and concentrated or moulded into a new being, called woman. The emiſſion of this feminine eſſence, or tincture, threw Adam into a deep ſleep; yet when he awoke he knew that an eſſential principle had departed from him, and that the woman was *bone of his bone, and fleſh of his fleſh;* not having been created, *but formed out of himſelf*, whereby he only retained the fiery property, the animating principle, or active power of generation; whilſt the rudiments or ſeeds of future beings were conſigned to the matrix of the woman; cold and moiſt, of the watery property. Here then individual generation ceaſed; and Adam, without the *counterpart of himſelf*, had no longer power to increaſe and multiply. Thus the two tinctures, or divine eſſences, animating and compounding ſoul and body, were divided; and by means only of a re-union, or contact of thoſe tinctures, could generation, then or now, be performed. It is on this ground that the male and female affections are continually turned towards each other; and that the deſire of love and union ſo ſtrongly pervades every individual of the human race. Hence alſo the tempter's reaſon for beguiling Eve, and hence the ſeducing power of love, which determined Adam to ſhare in all the horrors of her crime, ſo pathetically and affectingly deſcribed by Milton, in his Paradiſe Loſt.

The fatal conſequences of the fall we moſt

ſenſibly feel, and univerſally deplore. The earth ſhook from her foundations. The order of nature was quite inverted. The ætherial and terreſtrial elements, which before were faſhioned in harmony, and acted in uniſon, were now diſcordant, intemperate, and furious. Brute preyed upon brute, and bird invaded bird. The delicious fruits and flowers of Paradiſe were exchanged for thorns and thiſtles, and a poiſon injected by thoſe jarring elements into every green herb *. The ſerenity of a pellucid and ſmiling firmament was convulſed by the thunders of an incenſed Deity, by forked lightenings, by contending ſeaſons, by devouring winds, and impetuous ſtorms. Whilſt man, ungrateful man, from the privilege of holding theſe elements in ſubjection, became ſubjected to them; and hence ſubject to all the perils and misfortunes of his fallen nature.

Here, then, began the conflict of the human paſſions, as violent and ungovernable as the elements themſelves. Here the toil and labour of the man, who ſhould *earn his bread by the ſweat of his brow*, and the tears and travail of the woman, who ſhould *conceive in pain and ſorrow*, had each their ſource. Here, likewiſe, the dark catalogue of human infirmities, of diſeaſe and death, had its too early date; yet to this æra, which gave birth to our manifold misfortunes, muſt we look for that benign ſource of alleviation and cure, which the conciliatory hand of Providence has graciouſly afforded to thoſe who will ſeek for them; for *out of the ground hath the LORD cauſed medicine to grow; and he that is wiſe will not deſpiſe them; for with ſuch doth he heal men, and taketh away their pains*, Eccl. xxxviii. 4, 7.

Since, by his fall, man became ſubject to the

* By this appears, what neceſſity there is for every herb made uſe of in medicine to be diveſted of its groſs and deadly property by chymical purification.

elements,

elements, and their ſeven rulers *, from theſe he receives the conſtitution of his body; but his reaſoning intellect, and ſpiritual ſoul, are derived from the pure eſſence or tincture of the Deity, originally infuſed into the ſeed of man. To the violence and impurity of the elements we owe the diſorders of the body; to the temptations and allurements of Satan we juſtly impute the diſeaſes of the ſoul. Yet, by due attention to our reaſoning faculty, it is no hard taſk to preſerve health, or prolong life to the term of its *natural* diſſolution; whilſt, by the powers of the mind, and the light of the goſpel, we may ſtill avoid the poiſon of ſin, and become members of that glorious kingdom which is the ſure reward of the good and virtuous.

The imperfections and diſeaſes of the body, therefore, beginning with Adam, are conſequently tranſmitted to his poſterity; and may be divided into *hereditary* and *accidental*. Hereditary complaints proceed from a certain defect of the animal powers, or imperfect ſtate of the ſanguiferous ſyſtem, at the time of copulation. The accidental conſiſt of all ſuch maladies as are communicated by the diſcordant or putrid ſtate of the elements, not only during the time the child is encompaſſed in the womb, but from its birth to the lateſt hour of its exiſtence. And it might here be obſerved, that the increaſe or decreaſe of both hereditary and accidental diſeaſes, depend almoſt entirely upon the *purity* or *impurity* of the blood. For if pure in both male and female, at the time of impregnation, the fœtus will be naturally ſtrong and healthful. So likewiſe, if after parturition, and during life,

* The moiſtening influx of the moon acts on the marrow of the brain. Venus has her power in the genital parts. Eloquence is derived from volatile Mercury. The Sun hath a great affinity to the heart, and governs the vital principal. Mars, the author of choler, has his reſidence in the gall; Jupiter in the liver, the fountain of nutritive blood; and the ſpongy milt, the receptacle of melancholic humours, is the chief reſidence of Saturn.

care be taken to keep the blood in an uncontaminated and elaſtic ſtate, we ſhall not only avoid the common effects of exceſſive cold, heat, and moiſture, but eſcape that direful train of acute diſeaſes, communicated by putridity and infection; or, ſhould they by chance attack us, the effect becomes ſlight and temporary. A circumſtance, this, which ſurely ought to weigh perpetually on the minds of thoſe who know how to value the bleſſing of health, or would wiſh to live a long, an active, and a pleaſant life. This is therefore a ſpeculation of that high importance, that I ſhall now ſhew how hereditary complaints are communicated in the act of copulation---how increaſed and foſtered in the womb---how accidental diſeaſes follow and grow up---and how both theſe enemies to the health and happineſs of mankind may be prevented or overcome.

In that union of the ſexes to which we are inſtinctively impelled; or rather, in the union of thoſe eſſences, or tinctures, peculiar to the generative organs of the male and female, in the contact of which the firſt moments of human exiſtence commence, the moſt whimſical and abſurd thories have been ſet up. No branch of phyſiology has been more expoſed to cenſure and miſtake. While the phenomena of the heavens, of the earth, and even of the human mind itſelf, are traced with a ſteady hand, and with all the dignity of philoſophy, the functions of the human body, in health as well as under diſeaſe, though expounded with a profuſion of fantaſtical erudition, appear in almoſt as much doubt and darkneſs as in the days of Paracelſus.

Let us then proceed to review the mode by which generation is accompliſhed. I have in my former writings explained the ſyſtems of Buffon and of Lewenhoek, in their ſpeculations on the animalculæ found in the ſeed of man, and in that

of

of brute animals; I have alſo, in the medical part of my Family Phyſician, ſhewn the mode by which generation is performed, ſo far as relates to the action itſelf, and to its general effect. I ſhall now conſider it in a new light, as it concerns the propagation of ſoul and body, and of family temper, likeneſs, and diſeaſe; but as the female organ is ſo materially concerned in the myſterious act of generation, and in all its conſequences, I ſhall here take up the reaſoning of a late ingenious author, whoſe opinion of the action and powers of the female generative parts exactly coincides with my own.

The extremity of the uterine ſyſtem, without the nymphæ, ſeems not (except from its aperture, and the laſcivious ſuſceptibility of its texture) materially requiſite to generation. Immediately within the nymphæ, the *vagina*, or great canal of the uterus begins *(vide the Plate)*. Before coition has diſturbed its proportions, it is generally about five or ſix inches long; and when thrown into a circular form, without violent diſtention, its diameter is about a ſixth part of its length. But as, in coition, the vagina is the immediate receptacle of the penis, it is capable of great diſtention, and may be rendered of very conſiderable capacity. In geral, however, after frequent contact, this canal becomes much ſhorter, but more proportionably increaſed in its diameter; yet being contrived by its organization for the purpoſe of exciting titillation and pleaſure, it can, and does, accommodate itſelf to whatever ſize is neceſſary, cloſely to embrace the penis in the act of copulation.

At the upper extremity of this canal, the uterus, or womb, is ſeated. It is of a piramidal form, with its apex towards the vagina. Its greateſt length, in virgins, is not more than two or three inches, and its width is ſcarcely one; its internal cavity muſt therefore be very ſmall. It is connected to the va-

gina, or great canal, by a paſſage ſo ſmall, that a bodkin or ſtilet cannot be introduced without much difficulty. In the broad or upper extremity of the womb, the ovaria are ſeated. Their ſubſtance is ſpongy, and they contain an indefinite number of veſicles, of a duſkiſh ſemi-tranſparent quality, the involucra of which are diſtinct, and ſimilar to the general ſubſtance of the ovaria. Theſe veſicles are the ova or eggs, which contain the rudiments of the fœtus, of temperature, cold and moiſt, and which muſt abſolutely be impregnated with the male ſeed, containing the fire ſpirit, before it can be poſſible for generation to take place.

Now it has been, and is, the common opinion, that when venereal embraces take place, the whole genital ſyſtem of the male being thrown into action by libidinous deſire and violent friction, by this exertion the ſemen is thrown with conſiderable vehemence from the penis, and is either forced through the mouth of the womb, and attracted by the ovaria; or, that it is received by the Fallopian tubes, and conveyed by them through a variety of convolutions, till by their fimbriæ they are conducted to the ovaria, in the manner I have already fully deſcribed in the medical part of my Family Phyſician; all which tedious and complicated proceſs is alleged to take place in the *inſtant* of coition.

Others again ſuppoſe, that the internal orifice of the womb becomes open and pervious during the exertion and enjoyment of copulation, and that the glans of the penis abſolutely paſs into the cavity of the womb, and eject the ſeed immediately upon the ovaria. To each of theſe theories there appear inſuperable objections. In refutation of the firſt, we need only obſerve, that the vagina, from its ſtructure, and from its organization in the act of venery, is diſpoſed ſtrongly, and in every part, to embrace the penis; and as the glans muſt there-

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by be closely surrounded, although it reaches not in every person to the fartheſt limits of the vagina, the ſlight and momentary impetus of the ſemen will thus be very effectually reſiſted, if not totally ſubdued. If the penis be not of magnitude ſufficient to occupy the vagina to its full extent, the unoccupied ſpace muſt be ſomehow diſtended; and, let this vacuum be what it will, its reſiſtance muſt be effectual; and if it be not diſtended, the power or preſſure which occaſions its collapſe, will over-balance the impetus of the ſemen. But ſuppoſing the virile member in all caſes to be ſo exactly proportioned as to occupy the whole length of the uterine canal, which however we know is not the caſe, yet from what principle ſhall we aſcertain that the ſeminal tube of the penis and the apex of the womb ſhall be made ſo exactly to correſpond as to become continuous? The ſemen, in the event of coition, is doubtleſsly thrown out by the penis with ſome force, though this force will always depend upon the vigour of the male organs, and therefore muſt vary from the loweſt to the higheſt degree of vigour of which thoſe organs can be ſuſceptible. But even allowing the glans, penis, and apex of the womb to fall into exact contact upon due penetration, and that the male ſeed is always ejected with conſiderable force from the penis, and the vagina to be no barrier to the progreſs of it, yet how is it to force its way into the cavity of the womb? The aperture which leads from the vagina, or great canal, into the womb, is in fact no aperture at all. During menſtruation, indeed, it is pervious; but even then it is only capable of admitting a very ſmall probe; and this is no argument that it is naturally, and at other times, pervious. How often, too, has this aperture been entirely blocked up by preternatural obſtructions, and conception nevertheleſs taken place? Inſtances of this have often occurred; and the preciſion and

authority

authority with which they are recorded by different practitioners, leave no room to evade the argument. Hence this mode of impregnation appears not only highly objectionable, but utterly impoſſible; having no correſpondence with the human ſtructure, or with the economy of nature.

After what has been ſaid, it may appear idle to proſecute any farther refutation of the progreſs of the male ſeed by the Fallopian tubes, or through the mouth of the womb. But as authors of the greateſt reſpectability have believed in its progreſs through the tubes, and tell us they have even ſeen it there, it may not be improper to enquire how far this is aſcertainable? The Fallopian tubes, through which the ſemen is ſaid to paſs, originate, by very minute perforations, through the fundus of the womb; and, increaſing rapidly in their diameters, their capacities, when dilated, may be about the third part of an inch, where they approach the ovaria. Here, again, they ſuddenly contract, leaving only a ſmall opening, while their main ſubſtance is ſtill continued, and is expanded into that plaited or jagged fringe, called the fimbriæ, which is contiguous to the ovaria *. I ſhall now aſk, by what law in nature, by what effort of it, is the male ſemen to be conducted through this conical and convulated canal? Can the ſemen now poſſeſs any active force, to introduce itſelf through the rigid perforation of this organ, and to overcome the collapſe of the tubes? The ſtimulating power of the ſemen muſt ſoon be loſt in a veſſel which it has not power to diſtend; and we cannot ſuppoſe it capable of acting in a direction completely oppoſite to what is the acknowledged office of the tubes. It muſt be by irritability that the ovum is conveyed into the uterus from the ovaria; and we know no veſſels in any part of the body whoſe ac-

* See the medical part of my Family Physician, pages 17, 89, 97, &c. where all the parts, both male and female, are anatomically described.

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tion is double and contrary. This ſyſtem therefore has every appearance of improbability. But we are told by ſome, that they have actually ſeen the male ſemen in its unaltered ſtate, lodged in the Fallopian tubes. Theſe ſagacious authors might as prudently have affirmed that they had ſeen ſnow upon the canal in Hyde Park, at Midſummer. They did not know, or did not chooſe to recollect, becauſe it made againſt a pre-conceived opinion, that the human ſeed, when ſubjected to heat, eſpecially to ſuch a moiſt and natural heat as thoſe parts conſtantly afford, ſoon loſes its ſpiſſitude and tenacity, and becomes very ſubtilly fluid, and almoſt colourleſs. Beſides it is univerſally acknowledged, that a conſiderable part of the ſemen is almoſt always, immediately after coition, rejected by the female. When we attend to the many inſtances of credulity and impoſition in the theories of generation, we need not marvel at the aptitude and facility with which pretended diſcoveries creep into notice, and the ſolemnity with which they obtrude themſelves into ſyſtems.

All the foregoing arguments, againſt the poſſibility of a pervious communication between the vagina and the uterus, are alſo concluſive againſt the ſuggeſtion, that the penis, in the act of coition, penetrates into the cavity of the uterus. Nor is the aſſertion of thoſe who contend that this orifice, by the turgidity of the parts during coition, naturally opens and dilates itſelf, to receive the male ſeed, marked with the leaſt degree of probability. How is this dilatation of the orifice to be effected?--- Though the whole uterine ſyſtem, during the venereal act, be rendered ſtiff and turgid by animal deſire and influent blood, yet it is more probable that this turgidity would rather compreſs than dilate the orifice; and the ſtructure and texture of the womb ſeem exceedingly unfavourable to ſudden dilitation, by any means whatever. In an unimpregnated or

virgin

virgin ſtate, the uterus is ſo ſmall that its ſides coaleſce or adhere together, and it has no hollow appearance whatever; though from the texture and elaſticity of its fabric, it may be thrown into a globular form, which will conſtitute a cavity. But in coition, with all its occult and uncommon phenomena, what charm have we left to overcome this coaleſcence, and form this cavity, by opening or ſeparating the membranous ſides of the uterus?--- Will it here be ſaid, that the forcible ejection of the male ſemen will effect this purpoſe? or that the ſtiff and turgid ſtate of the penis itſelf will force its way into a fabric ſo remote and delicate? Though females may entertain ſanguine ideas of theſe things, we muſt ſuppoſe that the vigilant anatomiſt, toiling through the unalarming and chill organs of the dead, ought to furniſh a more rational hypotheſis, whence to deduce the active principle and admirable proceſs of the human impregnation.

Authors have been always eager to eſtabliſh the certainty of a conſiderable afflux of blood to the female organs, and conſequent turgidity, during the voluptuous communication of the ſexes; and this has been a wonderful prop to many abſurd conjectures. This afflux, and conſequent turgidity, they ſuppoſe, originates, like the erection of the penis, from the ſtrength of libidinous ideas, and other locally irritating cauſes; and is intended by nature to induce a tenſion in the female organs, that the progreſs of the ſemen may thereby be facilitated. This tenſion, again, they ſuppoſe, induces ſome kind of conſtriction, which is ſaid to ſupport the action of the different parts of the genital ſyſtem, but particularly of the Fallopian tubes. Theſe tubes, it is ſaid, are remarkably diſtended during coition, by the blood ruſhing into the numerous veſſels which creep between their coats, by which means they are erected, and their fimbriated terminations applied to the ovaria; and it is gravely

ly added, that diſſections of pregnant women, and the comparative anatomy of brutes, corroborate the opinion. Were it not for the ſerious reſpect with which this anatomical obſervation hath for a long time been favoured, nobody, ſurely, would be at the pains of detecting the abſurdity. Allowing that this turgidity, with all its concomitant circumſtances, really happens in the *living* ſubject, how can it poſſibly exiſt in a carcaſe flaccid with death, and, as is always the caſe in a human anatomized body, where death muſt have taken place ſome conſiderable time before?

But this turgidity, though it ſometimes may happen, and yet in a degree very limited to what is alleged, does not always happen; and when it really does take place, it ſeems rather to be the companion and encourager of libidinous gratification, than a principal and eſſential promoter of conception. To many women the male embraces are uncommonly, if not extremely indifferent; and to ſome they are abſolutely diſagreeable; yet even theſe women are prolific. There is no difficulty in ſuggeſting a very ſufficient and natural reaſon why the parts of the female, directly ſubjected to the action of the penis, during the venereal congreſs, ſhould become turgid with influent blood, and ſometimes be conſtricted. Nature, though ſhe ſeem in general unfriendly to exceſſive luſt, yet ſometimes permits it; and theſe are the means ſhe ſeems to have appointed for heightening it. Beſides, it is proper that the animal inſtinct, which prompts the re-production of the ſpecies, ſhould not be diſappointed in its gratification, however brutal theſe ſenſations and ideas may appear to the purified philoſopher. Theſe means then, however they may contribute to the mutual ſenſibility of the ſexes, in the voluptuous gratification of animal pleaſure, appear to have no real influence on the proceſs of generation, after the venereal con-

greſs has ceaſed; nay, we have reaſon to believe that their action or influence does not extend beyond the limits of the vagina, except in common with the reſt of the general ſyſtem, even during that congreſs. If an afflux of blood to theſe parts were always to be attended with theſe effects, what violence muſt the ovaria be expoſed to by reiterated coition, and by every return of the menſtrual diſcharge! During the menſtrual afflux, a very conſiderable diſtention muſt ſurely take place over the greateſt part, if not the whole, of the genital ſyſtem; and as this turgidity is the principal reaſon aſſigned for the action of the tubes, by what means are the fimbriæ diverted from exerciſing thoſe functions which turgidity, though from another cauſe, at another time ſo ſucceſsfully inſtigates? Alſo, how happens it that grateful copulation is not always productive, and the contrary? That the fimbriæ, in every venereal act, do not operate upon the ovaria, and thereby produce more fœtuſes, or a waſte of the ova; and that the organs themſelves are not incapacitated, or diminiſhed in their energy, by ſuch repeated exertions? We have every reaſon then to conclude, that the tention and conſtriction of the female organs, induced by the afflux of blood during coition, if of conſequence, are intended ſolely to promote animal gratification; and that they have no direct influence on the actual progreſs of the ſemen through the above-deſcribed communications to the ovaria.

Upon the whole, it is certainly no way equivocal, that the ſemen cannot, in any manner, be applied to the ovaria by means of the fimbriæ; that it cannot aſcend or advance through the convolutions of the Fallopian tubes; that it cannot divaricate and traverſe the compreſſed uterus; and that it cannot even effect a paſſage through the rigid bulwark of the cervix uteri. The probability of the progreſs of the *aura ſeminalis* through the ſame

paths

paths is deſtroyed by the ſame arguments; and the whimſical opinions founded on the preſence of animalcules in the ſemen, and on the organic bodies furniſhed by the ſemen of both ſexes, and uniting in the uterus, as far as this alleged aperture is concerned, muſt ſtand or fall by the ſame fate. It may however ſeem ſtrange, that a doctrine ſo ancient, and ſo univerſally believed, ſhould be ſo eaſily overthrown; and it may furniſh to the ſpeculative reader unfavourable ideas of the preſent ſtate of medical literature. He may indeed wonder that, though every ſcience has become rational and reſpectable, by the exertions of various cultivators, medicine alone has been able to reſiſt the diligence of a thouſand years: although it has been wreſted from the hands of nurſes, and its profeſſion become dignified and lucrative, it can ſcarcely be ſaid, at this day, to afford one unqueſtionable idea.

In the volumes of phyſiology, compiled by the moſt learned phyſicians, and drawn from the moſt learned ſources, will the unconcerned philoſopher find the dogmata of medicine conſiſtent with nature, or with common ſenſe?

But ſince the ſemen, in ſome ſhape or other, contains that animating principle which is indiſpenſibly neceſſary to generation; and ſince the ovaria as indiſputably produce ſomething from whence a living creature is to be diſcloſed, it becomes demonſtrably clear, that the influence of the male ſeed muſt be powerfully incorporated with the female, and directed to the ovaria, before this effect can poſſibly take place. We have already ſeen how this cannot happen; let us now endeavour to point out a rational medium by which it may be accompliſhed. For this purpoſe we muſt again return to the vagina, or canal of the uterus, as being the principal organ on the part of the female, which actually contributes to propagation; and without the full and complete uſe of which,

impregnation cannot take place. It therefore demands a very minute and attentive inveſtigation.

The vagina is elaſtic, and ſomewhat membranous, compoſed of muſcular fibres, blood-veſſels, nerves, and lymphatics. It commences from beneath at the nymphæ, and riſing obliquely about five inches, is loſt upon the uterus. Its capacity is very different in different ſubjects, and in no very diſtant periods of life in the ſame ſubject. A very reſpectable anatomiſt finiſhes his deſcription of it by ſaying, it is "*membro virili ſecundum omnes dimenſiones accommodabilis.*" Its inner membrane, though very uneven, is delicately ſmooth, and, from its nervous texture, exquiſitely ſenſible; the outer membrane is more ſpongy and muſcular; and the whole body of the canal is plentifully ſupplied with blood-veſſels, nerves, and lymphatics. We know little more of the lymphatics of theſe parts, than that they are more proportionally numerous than in any other part of the body. Thoſe which originate in the exterior parts of the female genital ſyſtem, traverſe the inguinal glans, while the deep-ſeated ones take a much more direct courſe to their place of union with the lacteals; but of theſe we ſhall be more particular, when we adduce our obſervations in favour of a very powerful abſorption ſubſiſting in the vagina.

The entrance into the canal of the uterus from without, is guarded by the nymphæ, which form an eminence on each ſide, ſo peculiarly conſtructed and arranged, that we muſt think lightly of the phyſiologiſt who could ſuppoſe them to be only appendages in office to the urethra. Indeed, as nature frequently operates more than one end by a particular ſtructure, we ſhall not pretend to limit the ſecondary or inferior offices which the nymphæ may promote; but we ſee much reaſon to believe them created to aſſiſt powerfully in preventing the ſpeedy eſcape of the male ſemen, and thereby expoſing it

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longer to the action of the abſorbent ſyſtem. A multitude of circumſtances corroborate this belief; and it will not be impaired by the allegation, that theſe ridges by no means conſtitute a regular and complete valve. Immediately within this barrier, a ſtructure, on the ſame principles as thoſe of the nymphæ, but more elegant and powerful, commences; and it is continued over the ſurface of the vagina, gradually growing finer, till it is loſt in ſmoothneſs near the upper extremity of the canal. This ſtructure is the rugæ of the vagina, ſo accurately drawn and deſcribed by Haller and others; but degraded by ſome anatomiſts, who mark it only as uſeful in exciting venereal enjoyment, or admitting expanſion during coition and parturition. It is inſinuating a mean and diſgraceful reflection on the important order and operations of nature, to ſuppoſe that theſe rugæ, which are not caſually arranged, but are regulated with as much preciſion and uniformity as we can trace in any other part of the general ſyſtem; I ſay, it is nugatory and preſumptuous to aſſert, that this intricate, extenſive, and beautiful arrangement, has been ſo minutely laboured for no other purpoſe, but merely to excite a greater titilation during the groſs and libidinous commerce of the ſexes, and a greater extenſion during parturition. This ſtructure may indeed promote ſecondary purpoſes; but it is intended for much nobler ends. Had theſe rugæ been conſtructed merely for ſimple contraction and dilatation, they would have covered equally the whole ſurface of the vagina, which certainly does not happen; neither, if theſe had been their principal uſes, would they be ſo ſoon and ſo eaſily obliterated. We believe, then, that the rugæ of the vagina are thus contrived principally to protract the ſemen in that viſcus, after the penis is withdrawn, and thereby to favour abſorp-

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tion; eſpecially as the qualities of the ſemen coincide wonderfully with theſe intentions.

The ſemen, as it is ſecreted from the blood in the teſticles, is very different from that heterogeneous mixture which is expelled by the urethra in coition; though by the alteration its fecundating quality is not improved. When it is conveyed into the veſicles it is of a thin conſiſtence, of a pale yellowiſh colour, and little in quantity. In theſe veſicles it is ſomewhat inſpiſſated, and its colour heightened; and after it is mixed with the liquor of the proſtrate glans, it becomes ſtill thicker, and of a more whitiſh colour. This conſiſtence which the ſemen acquires in its progreſs, from the teſticles, may produce other ſlight properties; but the principal intention of it ſeems to be to correſpond more effectually with the abſorbent power of the vagina: for thus, by the increaſed tenacity of the ſemen, the remora of its fecundating part muſt be protracted in the vagina, whilſt, at the ſame time, the abſorbents are allowed more time to attach thoſe active ſubtile parts intended to be carried into the circulating ſyſtem. We may add here, in order further to confirm the opinion concerning the uſe of the tenacity of the ſemen, that when too little of this mucilage is derived from the glands, or when it is of a depraved or thin quality, and of a cold nature, inſtead of a warm, vivifying, and quickening property, by which defect the whole mixture eſcapes the machinery of the vagina too rapidly, coition becomes totally unproductive. This is the ſeminal ſeroſity, as it is called, held to be one of the few cauſes of ſterility in man. And we may add further, that when the conſent and power of procreation begins to fail on the part of the woman, the crenulations of the vagina are then always viſibly decayed, whether affected by the advances of age, or by imprudently reiterated venery. But what are we to think of a very reſpectable

A View of the Absorbent Vessels.

pectable author, who gravely tells us that the ſemen by ſtagnation, and by the addition of the cream-like liquor of the proſtrate glans, is better ſuited to the projecting effort of the urethra, in the event of coition? Indeed, it is not to be denied, that the increaſe in quantity of the ſeminal mixture may enable the projectile power of the urethra, with its aiding muſcles, to act with greater efficacy; but a boy would laugh in my face were I to tell him that by adding to the weight and tenacity of water, his ſquirt would throw it much further.--- To act in concert, then, with theſe unqueſtionable qualities of the ſemen, the ſurface of the vagina, by means of its rugæ, from their elevation and arrangement, muſt have a very conſiderable effect in heightening the remora we have deſcribed. No doubt, if nature only had in view the prevention of the regreſs of the ſemen, we might have met with a much ſimpler mechaniſm; but as to this part very different offices, and all of them material, were allotted, it has been intricately qualified for them all. Thus, upon the whole, we ſee an admirable diſpoſition in the ſemen, and in the ſurface of the vagina, to facilitate and promote the action of the abſorbent veſſels.

Though the abſorbent ſyſtem has not been traced with the ſame minuteneſs and ſucceſs which have followed the inveſtigation of the ſanguiferous ſyſtem, it is however known to be very general and very powerful, and it is remarkably ſo in the cavity of the pelvis. How, otherwiſe, is that effuſion, which is conſtantly going on, in order to lubricate the whole genital ſyſtem in the female, and to prevent the coaleſcence or concretion of its ſides, reſumed? In thoſe unfortunate females whoſe menſes have taken place, but in whom likewiſe the expulſion has been prevented by the unruptured hymen, or by unnatural membranes blocking up the paſſage, much of the blood has always been reſorbed;

reſorbed; and in thoſe whoſe diſeaſes have exiſted long, and where the thick parts of the blood have begun to be broken down, the colluvies has been reſorbed, and a train of ſymptoms induced, not to be accounted for by the mere turgidity which this obſtruction occaſioned. The infection and progreſs of ſyphylis, or confirmed lues, not only eſtabliſh the certainty of a very rapid and powerful abſorption in the vagina, but alſo exhibit the prevailing influence of the irregularities of its ſurface. It is ſurely very evident, that the chief application of the venereal virus, whether in gonorrhœa or ſyphylis, but eſpecially in gonorrhœa, muſt be near the further extremity of the vagina, though there can be no doubt but the ulcerated glans may often affect the exterior parts by its introduction; but in a confirmed lues, the fundus of the vagina is rarely the ſeat of an ulcer, and it is never affected in gonorrhœa. Here the ſurface of the vagina being moſtly ſmooth, the poiſon runs downward, till falling upon the rugæ, it is there intercepted and retarded. Here then the poiſon is multiplied, and leiſurely applied to the mouths of the lymphatics, through which it is carried into the blood, where aſſimilating together, it contaminates the whole maſs. Though the progreſs of the ſyphilitic poiſon is not always thus regular, the variations do not affect this opinion. When the lymphatics and their glans are vigorous and eaſily permeable; when the application of the venereal virus is within the nymphæ; and when it is ſufficiently active, the firſt ſymptoms of diſeaſe ariſe from general contamination; and were this poiſon always very mild, and taken up by the abſorbents within the nymphæ, there is no doubt but the whole maſs would almoſt always be diſeaſed, without much chance of ulcer or preceding bubo. But there are many circumſtances which tend to retard the ſpeedy abſorption of ſyphilitic virus, even when it is extremely

tremely active; and among theſe the inflammation, which in general it muſt induce, is not perhaps the leaſt conſiderable; but theſe cannot affect the abſorption of the ſeminal fluid of the male. The ſyphilitic virus too may, from the laxity and lubricity of the vagina (a circumſtance very general in immodeſt women) not only eſcape abſorption, but may be carried outwards, to exerciſe its energy on the external parts. It is partly from theſe reaſons that immodeſt women are ſo little diſpoſed to conception, and that modeſt women, when ſubjected to venereal infection, generally experience the moſt latent and violent ſpecies of this diſeaſe. As therefore a greater ſurface of abſorbents is expoſed in the female to the contaminating influence of the diſeaſed male organs, and as the greateſt part of the female genital ſyſtem has a much readier intercourſe with the blood than through the inguinal glans, we meet with this ſpecies of ſyphilis much oftener in women than in men. The cure of ſyphilis too, by ſpecific remedies introduced into the vagina, fully demonſtrates the ſtrength and activity of the lymphatics in this canal. Is there then a ready and eſtabliſhed communication, for diſeaſe and for its remedies, between the vagina and the general circulating ſyſtem of the blood; whilſt a mild fluid, yet poſſeſſed of activity infinitely beyond that of any poiſon, and created for the higheſt and beſt of purpoſes, is not permitted to traverſe the ſame channels? Many other corroborating circumſtances, both in fact and in analogy, might be adduced here, were not theſe arguments in themſelves concluſive.

In a due ſtate of health there is what may be called an inteſtine motion in the blood, occaſioning and promoting its commixture, as well as its ſeparation. In all general diſeaſes, and even in many which are called local, this inteſtine commotion is heightened, diminiſhed, or deranged;

and in the exanthematous or eruptive diſorders it muſt be remarkably ſo. In ſyphilis, though this diſeaſe is not directly exanthematous, there muſt be exceſſive diſturbance and certain depravation prevailing throughout the whole ſyſtem, before ſuch complete deſtruction can be brought upon it. In thoſe caſes of diſeaſes, whilſt vehement infection, with its fatal conſequences, is overturning all before it, we have always found that milder infections could make no impreſſion. Hence the practitioner never heſitates to ingraft the ſmall-pox, though the patient may have already received the diſeaſe, either by natural contagion, or by prior inoculation: hence a milder diſeaſe is often removed by a ſeverer one; hence ſlow conſumption is always retarded, and often overcome, by fecundation; and hence fecundation itſelf, as the feebler ſtimulus, is often prevented by the anticipating diſturbance of ſyphilis, or of ſimilar diſeaſes vehemently pre-occupying the circulating ſyſtem. It is this anticipation, this prior poſſeſſion and change in the circulating blood, which reaſonably and emphatically accounts for the want of influence in the human ſemen upon the female after impregnation has fully taken place, or while the mother is providing milk. And we might account for the production of twins, triplets, and thoſe rare inſtances of more numerous progeny, from the ſame circumſtances. One, two, or more ova may indeed be ſo ripe as to meet completely the fecundating impulſe of the male ſemen at one time; and it is perhaps more ſtrange that the different fœtuſes ſhould be maturated and expelled about the ſame time, than if a greater period intervened between the expulſion of each; and might not a ſecond intercourſe of the ſexes be ſucceſsful, when the female circulating maſs was not fully pre-occupied by the influence of the firſt? But the extent and influence of prior infection, or impregnation of the

the blood, has been better obſerved in the venereal, than in any other diſeaſe or natural occurrence. Women whoſe general ſyſtem is vitiated by the ſyphilitic virus, are always incapable of conception; or if the vitiation be not complete, but in a ſlight degree, an imperfect fecundation may take place; but its product fails not to demonſtrate the want of energy, and the unqualified ſtate of the mother, from whence it drew its principal arrangement. Theſe ideas are corroborated by the mode of cure adopted in the circumſtances we have been deſcribing, and by the general effects of it.

Thus we have endeavoured, and we hope with ſucceſs, to eſtabliſh the truth of a ſtrong power of abſorption in the genital ſyſtem of the female, originating in the vagina; and a diſpoſition in the whole maſs of blood to be affected according to the properties of what may be mingled with it. And as, from the preſent ſtate of anatomical knowledge, we have no right to ſuſpect any other mode than this of abſorption, by which the unrejected and finer parts of the ſemen can in any ſhape, and with any effect, be determined towards the ovaria, let us ſee how this can be farther aſcertained by what we may ſuppoſe to be the effect of the abſorbed ſemen, and the future appearances of impregnation.

In human creatures the evolution of all their parts is gradual, and the work of time. From the moment in which the ovarian nucleus receives the vivifying impulſe from the ſemen, till the period of puberty; from the dawn of its exiſtence, to the completion of its figure and its powers; its alterations are ſo many, and ſo varied, that our idea of the germ is not recognizable in that of the infant, and our idea of the infant again is loſt in that of the perfect animal. A gelatinous particle, without neceſſary form and texture, becomes a ſtupendous fabric, ſo intricate and elaborate, though at the

ſame time perfect and complete, that human ingenuity and reaſon have toiled almoſt fruitleſsly for thouſands of years in inveſtigating the progreſs. It has indeed been averred by ſome, that all the different organs of the animal in its complete ſtate are original and diſtinct in the embryo, and are only unfolded and rendered more evident by its increaſe. This, ſurely, is not the caſe. The animal is certainly endowed with the power of completing itſelf; and can, from inorganized parts, produce an organized ſtructure. The parts are only eveloped and perfected as they become uſeful in the different ſtages; and the evolution of many of them can be prevented without the deſtruction of life, or exceſſive prejudice to thoſe already eveloped. If the different organs, or rather principle, are at firſt perfect, why are thoſe effects which depend upon them not perfect alſo? why is the ſtate of infancy a ſtate of idiotiſm? why is the temper of youth capricious and flexible? and why the temper and paſſions of the adult but barely diſcernible in the preceding ſtages?

Being of opinion, then, that the different organs are matured only as they become requiſite and neceſſary; conſequently we conſider that the evolution of the generative organs in both ſexes muſt be among the laſt efforts of the increaſe and completion of the body. This evolution could not have taken place earlier. If it had, the mind muſt have been affected by ſuch impulſes as announce the maturation of theſe organs, by which we know the mind, body, and ſoul, are connected. In the male, the foundation and powers of maturation, of that ſtrength, and of thoſe more rational qualities which belong to him, are ſaid to ripen with puberty: hence communication with the female, before theſe are finally arranged and ſecured, proves inefficient, and intails upon him debility both of body and mind. The ſame poſition holds,

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as far as the ſame ends are concerned, with reſpect to the female; and we cannot ſuppoſe that nature could be ſo idly eccentric as to puniſh the female with a diſpoſition or propenſity to procreate before the body were capable of undergoing the various diſorders and dangers of pregnancy and parturition. For the ſame reaſons, none of the ordinary organs of ſenſe are qualified to receive or communicate diſtinct impreſſions, till the brain, the ſeat of the animal ſpirit, the heart, the ſeat of the vital ſpirit, as the liver is of the natural *, have acquired thoſe properties which muſt fit them for their arduous offices. It is only when the different organs of ſenſe have been completely evolved, and all their parts ſound and juſt, that the power of the mind is effectuated and eſtabliſhed. This faculty, though it ſeem eſſentially different from reaſon, is, no doubt, the origin of it; for the extenſion of common ſenſe from memory, or rather from compariſon, and what may be called the balance of the ſenſes, conſtitutes what are called reaſon and judgment. While the organs are incomplete, from infancy or from diſeaſe, their communication with the underſtanding is alſo incomplete. Thoſe who have been born blind, or whoſe eyes have been deſtroyed in infancy, before they were become uſeful, have none of thoſe ideas which depend upon the eye; it is the ſame with the deaf, and in all caſes of idea depending upon one ſenſe: and we may add, the early caſtrated have no comprehenſion of, or propenſity to, the gratifications of love. Do not theſe things ſhew (and a thouſand other circumſtances might be adduced to ſtrengthen the proof) that the mind acquires its powers only as the parts of the body are unfolded and confirmed; that the body is per-

* It is obſervable, that as long as theſe ſpirits are in harmony, ſo long the ſoul is confined to the body, but immediately that they are diſunited, death is the conſequence.

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fected only as the mind is qualified to receive its impreſſions; and that the parts of the body are perfected by one another?

During infancy and youth, ſtrictly, the ovaria are ſimple inorganic maſſes, partaking of no more life than is barely ſufficient to ſuſtain them, and connect them with that energy and progreſs of conſtitution which are afterwards to unfold all their properties. At the period of puberty, thus denominated from the change that takes place in the genital ſyſtem at this time of life, this progreſs and development of the ovaria is finiſhed by nature; and theſe bodies are generated and completed within them, which will exiſt without impregnation by the male, but which this impregnation alone can finally maturate and evolve. That theſe bodies are not generated at an earlier date, anatomy, as well as reaſon, founded on the foregoing arguments, aſſure us; and, that the ova of all the fœtuſes which the female is afterwards to produce are generated at that time, ſeems equally certain. Though this change in the ovaria is the moſt eſſential, the whole genital ſyſtem alſo undergoes a very material change. The ſimple alterations of ſtructure and dimenſion in the different parts of this ſyſtem, though they are neceſſary and ſubſervient to generation and parturition, yet they are not ſo material, either to our purpoſe, or in themſelves, as to require a minute deſcription. This, however, is not the caſe with reſpect to the menſes. It is chiefly with a view to the nutrition of the fœtus that this extra-ſanguification in the female is provided by nature; which is determined to the genital ſyſtem, in the ſame manner as the other fluids are determined to other outlets; but as the continued drilling off of this extra blood would be exceedingly inconvenient and diſguſting, nature has prepared, as it were, a ciſtern for its reception. What may be ſufficient to bring on

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the hæmorrhage, however, is only accumulated; and the general redundancy, induced by the obſtruction and accumulation, ſubſides gradually as the hæmorrhage goes on. This is the manner of menſtruation in the unimpregnated female, and theſe are the reaſons why it aſſumes a periodical form. In the impregnated female, again, the preparation of extra blood ſtill continues, but its conſumption becomes very different. By the extenſion of the uterus, and the waſte occaſioned by the nouriſhment of the fœtus and its involucra, the ſurcharge, or extra preparation of blood is nearly balanced, or taken up as it is prepared; and hence the periodical efforts are almoſt loſt. In the firſt months of pregnancy, however, the uterine ſyſtem is not always able to conſume the ſurcharge of blood, and thereby to take off the periodical effort; and hence it is that the loſs of the fœtus happens moſt generally in the early months, and at the uſual period of the menſes, unleſs ſome accident has ſupervened. It is alſo nearly from the ſame reaſons that miſcarriage is ſo often to be apprehended in the latter months of pregnancy, and that the fœtus is afterwards expelled from the uterus. When the fœtus has acquired all that bulk and ſtrength which the capacity and powers of the uterus can confer, and when a change of circulation and mode of life becomes neceſſary to it, the uterus and fœtus are rendered plethoric; a general accumulation ſucceeds; and the periodical efforts of the menſes return. During the middle months of pregnancy the fœtus is in a ſtate of rapid growth, and is capable of conſuming all the blood which the mother can furniſh; but there is neither room nor waſte in the latter months for the blood which the mother is conſtantly pouring in; and hence ariſes that plethora, both in mother and child, which is to inſtigate the effort to parturition; which occaſions the effuſion after parturition;

turition; and which is to ſupply the extended circulation of the born child.

But, beſides the utility of menſtruation to the fœtus, there is a very evident connection between it and impregnation. To ſpeak of it as a proof of the ripened qualifications of the female, is to ſay nothing; its immediate action is eſſential to conception. In the human female, it is well known, coition is almoſt only ſucceſsful immediately after this evacuation has ſubſided. Who will reconcile this (and it is no modern and groundleſs obſervation) to the conſequence which has been aſcribed to turgidity and tenſion, which we have already adverted to? Almoſt every woman who has frequently undergone pregnancy, and who has attended judiciouſly to the phenomena of that ſituation, calculates from the laſt ceſſation of the menſes. At this time, or rather very ſoon after, the plethoric tumult of the general ſyſtem is completely ſubſided, and the abſorbed ſemen gets quiet and unanticipated poſſeſſion of the circulating blood; and at the ſame time the gradually returning plethora promotes its action, and perhaps its determination to the ovaria. When the menſes are interrupted, or profuſe and frequent, impregnation ſeldom takes place; and it does not admit of a doubt, that when the determination of this blood is towards the mammæ, in the form of milk, coition is unſucceſsful; and as ſoon as its determination to the uterine ſyſtem is reſtored, other things being favourable, copulation ſucceeds. We may add, as a known fact, that continuing to give ſuck after the uſual period will occupy the plethora, and prevent its determination, in the form of blood, to the uterine ſyſtem. It is an additional reproach to the groſſneſs of human nature, that this practice hath too often been put in execution in order to obviate conception. Sometimes, there is reaſon to believe, conception has taken place while the plethoric determination

termination to the breaſts continued. I am rather diſpoſed to believe, that in ſuch caſes its return to the uterine ſyſtem was recommenced; for about the ſame time the milk generally loſes its nutricious and alimentary qualities, and gradually decreaſes.

But we have ſaid enough to deſcribe and ſubſtantiate thoſe parts of the female, which puberty has prepared for generation. We ſhall now conſider its operation on the male. It need not be repeated, that the ſeminal fluid is an exceedingly penetrating and active fluid. Its effects, after it is generated, even upon the male, demonſtrate its activity and influence, far beyond the precincts wherein we believe it to be accumulated. After puberty, its ſecretion, even during indifferent health, is continually going on; and thoſe collections of it in its reſervoirs, which are not thrown out by venereal exerciſe, or by other means leſs decent, are reſorbed and mingled with the general maſs. What is actually reſorbed about the period of puberty, before the ſyſtem has been habituated to, or ſaturated with it, produces very curious and remarkable effects throughout the whole frame. The fleſh and ſkin, from being tender, delicate, and irritable, become coarſe and firm; the body in general loſes its ſucculency, and a new exiſtence ſeems to take place. The voice, a proof of the tenſion and rigidity of the muſcular fibra, loſing its tenderneſs and inequalities, becomes ungratefully harſh; and the mind itſelf, actuated by the progreſs of the body, and forgetting all its former inclinations and attachments, acquires diſtinctly new propenſities and paſſions. Theſe changes are not entirely the effect of ordinary progreſſive age and ſtrength; neither are they promoted by intercourſe with the world; for caſtration will anticipate them, and premature venery, or even gradual familiarity, and early onaniſm, will diminiſh

them. Boys who have been ſubjected to caſtration, never acquire either that ſtrength of body nor capacity of mind which dignifies the complete male; and the ſame cruel and unnatural operation performed on brute animals, diminiſhes their bodily ſtrength, their courage, their liberty, and the fierceneſs of their temper.

If ſuch are the effects of the ſeminal fluid when reſorbed by the male, how powerful muſt it be when ſuddenly mingled, and moſt probably in greater quantity, with the circulating fluids of the attracting female! Coition, or rather the aſorption of the ſeminal fluid of the male by the female, even when not ſucceeded by impregnation, induces an alteration very general over the female ſyſtem. The local influence of which may be inferred from the general change which it is capable of inducing during complete health; from the relief which it effectuates in many ſpecies of diſeaſe; and from the general vivacity and cheerfulneſs diffuſed over the whole animal frame. It would be prolix to go over every diſeaſe which will warrant thoſe opinions; yet, in the eye of common obſervation, the ſallow and inanimate female, by coition, often becomes plump and robuſt, beautiful and active; whilſt the widow, or married woman deprived of commerce with her huſband, gradually returns to the imperfections and peculiarities of ſingle life; and the ancient virgin, all her life deprived of this animating effluvia, is generally conſumed with infirmity, ill temper, or diſeaſe. It is well known too, that the want of coition at the time of life when nature ſeems to require it, lays the foundation of many diſorders in females; and that the uſe of it removes theſe and even other diſeaſes. Chloroſis, or the whites, almoſt always attacks females immediately after puberty; and even when the violence of its ſymptoms have not been diſ-

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cerned till a later period, its origin can always be traced back to that time. When the human ſyſtem is completely evolved, and all its parts have acquired their full growth, a balance is produced between the circulating and ſolid ſyſtems; though, from the ideas we have ſuggeſted concerning the menſes, this balance in the female cannot ſtrictly be called complete. It is only complete in her when in perfect health, and in an impregnated ſtate. At other times, the *catamenia*, as preponderating againſt the powers of the ſolid ſyſtem, in proportion to their degree of the period, diſturbs the equilibrium, and thereby, more or leſs, induces a ſtate inconſiſtent with perfect health. But when the propelling power of growth has ceaſed before the ſolids, either from actual diſeaſe, or want of uniformity in either period or acceſſion with reſpect to the progreſs of the circulating ſyſtem, have acquired their proper vigour and tone, and when the *catamenia* has aſſumed its deſtination before it is accompanied by the general as well as local energy which is requiſite to expel it, an univerſal want of balance comes on; the blood loſes its ſtimulating influence on the vitiated ſolids, and theſe, in their turn, act feebly on the diſtempered blood. Accordingly, in the cure of this diſeaſe, no matter whether adopted from particular theories or from experience, medicines are directed to reſtore vigour to the ſolids, and conſiſtence and ſtimulus to the circulating maſs*. Nature proceeds in the ſame manner; and the beneficial effects of coition in the cure of this diſeaſe have been too material to eſcape obſervation. It may be alleged, that theſe effects depend entirely upon local influence; and that even voluptuous gratification, by quieting the turbulence of paſſion, is of

* The Doctor's reanimating Solar Tincture is particularly adapted to accomplish all these various purposes, with desired effect.

conſequence towards effecting the cure. We ſhall not ſay that theſe things are unavailing; for it appears, that the relief obtained is chiefly owing to the increaſed inteſtine motion, and conſequent ſtimulus, communicated to the blood by the abſorbed ſemen, by which the ſolids themſelves are ultimately reſtored: and we are the more confirmed in this opinion, becauſe all theſe fortunate circumſtances attend, whether coition be ſucceded by impregnation or not. Hyſterics, and other diſeaſes, would furniſh us with ſimilar explanations, and ſimilar cures.

Let us now advance a little nearer our object. It is beyond a doubt that, in whatever manner the ſemen acts upon the female, it does not act ſuddenly, notwithſtanding the general aſſertions of many authors. However productive coition may be, the fecundated product of the ovaria is not immediately diſengaged. We dare not avouch this fact from obſervations made on the human ſubject, becauſe ſuch obſervations never have been attempted, nor ever can with the ſmalleſt probability of ſucceſs: but the diſſection of brutes, by the moſt eminent anatomiſts, with a direct view to the elucidation of this fact, aſcertains it, as far as ſuch evidence can be admitted. In the diſſection of ſmall animals, by De Graaff, he found no diſcernible alteration in the uterus during the firſt forty hours after coition, but a gradual change was perceptible in the ovaria; and what he ſuppoſed the ripened origin of the future animal, at the end of that time, loſing its tranſparency, became opaque and ruddy. After that time, the fimbriæ were found cloſely applied to the ovaria; the cavities whence the ova had been expreſſed were diſcernible; and about the third day the ova were diſcovered in the uterus. In large animals, and in thoſe whoſe time of uterine geſtation was longer, it was found that the progreſs which we have been deſcribing was proportionably

ſlower. The ſame experiments have been made by different anatomiſts, and perhaps with different views; and though they have not always been managed with the ſame judgment and dexterity, yet all of them more or leſs confirm the idea that there is a very conſiderable lapſe of time intervening between productive copulation and the expulſion of the ovum from the ovaria. But if this is the caſe with animals which ſoon arrive at puberty, and which, like human creatures, copulate not perfectly before puberty; whoſe lives are ſhort, and progreſs in equal periods of time more rapid than thoſe in man; by parity of reaſon it muſt happen that in women the period between impregnation and the expulſion of the fecundated product of the ovaria muſt be conſiderably greater than what has been obſerved to take place in theſe animals. If all this be true, how are we to ſuppoſe nature to be employed during this interval? We believe it is during this period that the whole female conſtitution is labouring under the fecundating influences of the ſeminal fluid taken into the blood by the abſorbents; while the ovaria are largely participating, and their product ripening, by means of the general ſtimulating proceſs. And the ſame proceſs which maturates the ovum tends to facilitate its excluſion. The ovaria, as well as their product, are at this time enlarged, and other changes, ſubject to the examination of our ſenſes, induced. It is no proof againſt the reality of this general alteration in the circumſtances of the circulating ſyſtem, and conſequent revolution in the ovaria, that the whole is accompliſhed with but little viſible diſturbance, either local or univerſal. In other caſes of material alteration in the maſs of blood equal quietneſs and obſcurity prevail. In ſcrofulous or ſcorbutic taints; in the inoculated ſmall-pox, or when they are produced by contagion; the poiſon ſilently and ſlowly diffuſes itſelf throughout the whole maſs, and

and a highly morbid ſtate is imperceptibly induced. Thus an active and inſinuating poiſon intimately mixes itſelf with all the containing, perhaps, as well as contained, parts, perverts their natures, and is ready to fall upon and deſtroy the very powers of life, before one ſymptom of its action or of its influence has been diſcerned. It is the ſame in a confirmed lues; it is even more remarkable in the hydrophobia derived from the bite of a mad dog; and the whole round of contagious diſeaſes have the ſame unalarming, yet certain, progreſs and termination.

That the final influence of this elaborate proceſs ſhould be determined particularly, and at all times, to the ovaria, is no way marvellous. To qualify the ovaria for this, they are ſupplied with a congeries of blood-veſſels and nerves, at puberty larger and more numerous than what is allotted to any other part of ſimilar magnitude. Were the ovaria merely a receptacle for the ova, which the venereal orgaſm, communicated by the nerves, or by the impulſion of the applied ſemen, was to lacerate; what uſe would there be for ſo intricate and extenſive an arrangement of blood-veſſels and nerves? But we may further remark, that every diſtinct proceſs in the human body, either during health or diſeaſe, tends to one particular and diſtinct purpoſe. The kidneys do not ſecrete bile, nor does the liver ſtrain off the uſeleſs or hurtful parts of the blood, which are deſtined to paſs off by the emulgents; neither do the ſalivary and bronchial glans promiſcuouſly pour out mucus or ſaliva: the variolous virus does not produce a morbilious eruption, ſyphilitic caries, or ſcrofulous ulcer; why then would the fecundated blood unconcernedly and promiſcuouſly determine its energy to the ſkin, the lymphatics, or the ſubſtance of the bones? We know none of the operations in the human body, deſtined for the ordinary purpoſes

poſes of life and health, or for the removal of diſeaſe, but in a greater or leſs degree involve the machinery of the whole ſyſtem. A ſingle mouthful of food, while it is prepared, purified, and applied to its ultimate purpoſes, is ſubjected to the action of all the known parts of the body, and without doubt to all thoſe parts with the properties of which we are unacquainted; a draught of cold water ſpreads its influence almoſt inſtantaneouſly from one extremity to the other; the ſlighteſt wound diſturbs even the remoteſt parts, and is followed, not unfrequently, with the moſt unhappy effects; an almoſt inviſible quantity of poiſon ſets the whole frame in torture, and all the active powers of the body inſtinctively exert themſelves to ſollicit its expulſion. Can we diſtinguiſh theſe things, and admire them, and then ſuppoſe that the moſt material operation of the human body, the renovation of itſelf, is to be accompliſhed in a corner, and with infinitely leſs formality and ſolemnity than a ſpittle is caſt upon the wind? The evident means are ſufficiently degraded; we need not exert our ingenuity to degrade them further.

It is during this interval, between productive coition and the excluſion of the ovum from the ovaria, that likeneſs, hereditary diſeaſes, and the like, are communicated and acquired. Inſtead of that influence which the imagination of the mother is ſuppoſed to poſſeſs over the form of the child, might we not ſuſpect that the ſeminal fluid of the male, co-operating during this interval with the influence of the female upon the ovum, inſtigated a likeneſs, according to the influence of the male and female tinctures, in the united principles? It is during this period only that the diſeaſes of the male can be communicated to the child; and if we admit not of this interval and general operation of the ſeminal fluid, we cannot ſee how they can be communicated, though thoſe of the

mother

mother may be communicated then or at a much later period, conſidering how the child is nouriſhed while it is in the uterus and at the breaſt. It may be urged againſt this early and effectual acquiſition of likeneſs, that the fœtus does not acquire even the diviſion of its largeſt members till long after its excluſion from the ovaria: but then we are confident that as the fœtus takes all its form and other properties from the active ſubtilty of theſe blended tinctures, we cannot ſee any reaſon why it ſhould not poſſeſs this hereditary faculty, in common with the reſt. If likeneſs depends upon the imagination of the female, how happens it that the children of thoſe whoſe profligate manners render the father uncertain, and whoſe affections ceaſe with the inſtant of libidinous gratification, are as frequently diſtinguiſhable by their likeneſs as thoſe children who have been born under none of thoſe misfortunes? If the features are not planted during this period, and if imagination be not idle or uſeleſs, how was the ſix-fingered family, mentioned by Maupertuis, continued? When a female of that family married a man who had only the uſual number of fingers, the deformity of her family became uncertain, or ceaſed; and we muſt ſuppoſe her imagination could not have been inactive or diminiſhed, whether alarmed by the fear of continuing a deformed race, or inſtigated by the vanity of tranſmitting ſo remarkable a peculiarity. Were imagination, in a pregnant woman, ſo powerful as many have endeavoured to repreſent it, the mother, profligate at heart, though not actually wicked, would always betray the apoſtacy of her affections; and even a virtuous woman might divulge that ſhe had looked with as much eagerneſs at a handſome ſtranger as ſhe had looked at the aquiline noſe, or other prominent feature, of her huſband.

But admitting that the ſeminal fluid of every male

male poſſeſſes ſome kind of influence peculiar to that male, and connected with his form, as well as his conſtitution; in the ſame, or in ſome ſimilar manner, it contains, notwithſtanding the elaborateneſs of its preparation, the ſtamina of diſeaſes, ſome of which often lie longer dormant than even the features of individuals; that the ova are as peculiarly conſtructed, by the conſtitution of the female as any other parts which depend upon gradual and ſolitary evolution; and that theſe, operating upon each other by the intervention of the general ſyſtem of the female, may, according to the power or prevalence of either, affect the features and figure of the incipient animal, or rather the inorganized maſs from which the features and figure of the animal are afterwards to be evolved: admitting all theſe things, will national or even more extenſive ſimilitude corroborate the opinion?

We ſhall have occaſion to remark that the preſervation and continuation of the particular ſpecies appear to proceed from that parent who in the act of procreation has diſcovered moſt ſtrength and vigour, and this is commonly the father. A young negro woman, in Virginia, after having brought forth for the firſt time a black child, was delivered a ſecond time of twins; one of them, a boy, was black, and the other, a girl, was a mulatto. As the boy grew up, he retained his ſhort hair, which was naturally frizzled, and had a reſemblance to wool; other marks plainly ſhewed that he was a true negro, and in every reſpect like the black father who had begotten him. The girl, on the other hand, was tolerably white; ſhe had blue eyes, long black hair, without any natural curl; in ſhort, ſhe had a great reſemblance to the overſeer of the plantation, whom the negro huſband ſuſpected of cohabiting with his wife. Becoming pregnant a third time, ſhe was delivered of three

children, two of them mulattos, and the other a perfect negro.

Shall we aſcribe this to the effect of imagination? ſuch an explanation is rejected by the philoſopher, as abſurd, and contrary to every law of nature.--- We can account for the third delivery, therefore, only by admitting the cohabitation of two fathers, of different races, and then a ſuperfœtation.

While men continue in the ſame climate, and even in the ſame diſtrict, an uniform peculiarity of features and figure prevails among them, little affected by all thoſe changes which improve or degrade the mind; but when they migrate, or when they are corrupted by the migration of others, this national diſtinction in time is loſt, though in the latter caſe it ſeems to be recoverable, unleſs the cauſe of change be continued.--- The beautiful form and features of the ancient Grecks are at this day diſcernible in their deſcendants, though they are debaſed by intercourſe with ſtrangers, and by forms of government ultimately affecting their conſtitutions; the deſcendants of the few who by chance or deſign have been obliged to ſettle among the ugly tribes in the extremities of the north, have by their intercourſe with theſe tribes, and by neceſſarily accommodating themſelves to the ſame modes of life, beſides other circumſtances, become almoſt equally ugly; and the Jew himſelf, though he abhors to mingle with a different nation, and though his mode of life is nearly the ſame in all climates, yet the ſettlement of his anceſtors in any one particular climate, for ſome centuries, will very ſenſibly impair the characteriſtic features of his people. As equally in point, and leſs liable to queſtion, we may mention the following ſimilar obſervations: a Scotchman, an Engliſhman, a Frenchman, or a Dutchman, may, even without their peculiarities of dreſs, be almoſt always diſtinguiſhed in their very pictures; the ſturdy and

generous

generous Briton, notwithſtanding the ſhortneſs of the period, and the uninterrupted intercourſe, is traced with uncertainty in the effeminate and cruel Virginian; and the negroes in North America, whoſe families have continued ſince the firſt importation of theſe unhappy creatures, and whoſe modes of living, excluſive of their ſlavery, are not materially changed, are much leſs remarkable for the flat noſe, big lips, ugly legs, and long heels, than their anceſtors were, or than thoſe who are directly imported from the ſame original nation. From theſe obſervations it ſeems allowable to infer that though climate, manners, occupation, or imitation, cannot materially affect the form or features of the exiſting animal; yet theſe circumſtances, becoming the lot of a ſeries of animals, may, by inducing a change in the general maſs both of the male and female, be the remote cauſe of a change in their product.

After what has been premiſed, it ſeems rational to conclude, that the prolific fluid, in coition, is neither carried through the Fallopian tubes, nor protruded through the aperture of the uterus, to the ovaria; but that it is taken up by the abſorbent veſſels, and conveyed into the ſanguiferous ſyſtem, where, indeed, every active principle that can poſſibly affect the human conſtitution is alſo conveyed. That by circulating through the blood, it is, by its natural impulſe, and the additional ſtimulus acquired from the mother, forced through the correſponding veſſels into the ovaria, where if it find one or more of the ova in a ſtate fit or ripe for impregnation, conception takes place accordingly; and either one or more are impregnated, as the maturated ſtate of the ovaria ſhould happen to be. But if none of the ova or eggs are in a ſtate ſufficiently mature, or chance to be injured by any offending humours, by debility, or diſeaſe; in either of theſe caſes impregnation is fruſtrated, juſt

the ſame as often happens to an addled egg, or to a damaged grain of corn thrown into the earth.

On the other hand, if the male organ be deficient in vigour, or the ſemen be defective in quantity, conſiſteney, or active power, it then fails of ſtimulating the female fluid, and is incapable of influencing impregnation. In order therefore that the act of copulation ſhould be productive, the male muſt unqueſtionably convey to the female an elaborate tincture, which poſſeſſes the eſſences of his whole ſyſtem, as well mental as corporeal*: in this act, the utmoſt energy and powers of the mind or the body, and of the ſoul, are intimately connected; and all contribute their particular influence to the ſeed; of which every father muſt be ſenſible when he recollects the action of the heart, the ſeat of life; of the brain, the ſeat of the intellect; and of the whole powers of the body, concentrated and impelled, as it were, through the genital ſyſtem.--- That this liquor comprehends the active principles of body and ſoul, will not, I think, be doubted by thoſe who give the foregoing arguments their proper weight; and that it conveys with it, more or leſs, the direct image of the parent, I take to be confirmed by the evidence of the ſcripture, where we are told that one abſolute and unequivocal form was given to man, in the expreſs image of the Deity. So that man, thus organized and commiſſioned, was doubtleſsly to convey to future generations that divine image or ſignature which God had graciouſly ſtamped upon him. For this purpoſe the ſeed of man, or efficient princi-

* These essences are derived from the four principal members, viz. the brain, heart, liver, and testicles. The brain, the seat of the animal and intellectual soul; the heart, of celestial heat, or vital spirit; the liver and kidnies, the seat of natural and elementary power; and the testicles, the reservoir, or principle that propagates animal life and celestial virtue. The constituent parts proceed from these, and from these the other members are derived.

ple

ple of generation, muſt be mingled with the vegetative fluid of the female; and being attracted or taken up by the abſorbent veſſels from the uterine canal, paſſes immediately into the circulating ſyſtem, where aſſimilating with the peculiar temperature of the mother, and acquiring new energy from the enlivening quality of the blood, it is directed through its natural channels to the ovaria, impregnating the germ by its active quality, and conveying to it the peculiarities it had derived from the conſtitutions, forms, tempers, and diſpoſitions, of the parents, with the ſeeds of whatever diſeaſes, impurities, or taints, were lurking in their blood: for from the blood and brain is the male ſeed primarily elaborated, and into the female maſs is this thrown and aſſimilated, before impregnation can poſſibly take place. In the courſe of ſix days, I conclude the united tinctures to have travelled through the whole circulating ſyſtem; to have participated of the hereditary forms and peculiarities of the mother; and to have propelled the ovum or egg from its ſeat in the ovaria to a ſuſpended ſituation in the uterus, hanging by a minute thread, that afterwards becomes the umbilical veſſel, or aperture through which nouriſhment and life is conveyed from the mother to the child. This firſt viſible ſtate of conception, which reſembles the lucid appearance of a drop of water tending to coagulation, is correctly ſhewn in the firſt figure of the annexed plate, preciſely in the ſtate it was extracted from the uterus of a female who died on the ſixth day after contact with the male, and is now to be ſeen, preſerved in ſpirits, at Rackſtrow's valuable Muſeum, in Fleet-ſtreet, London.

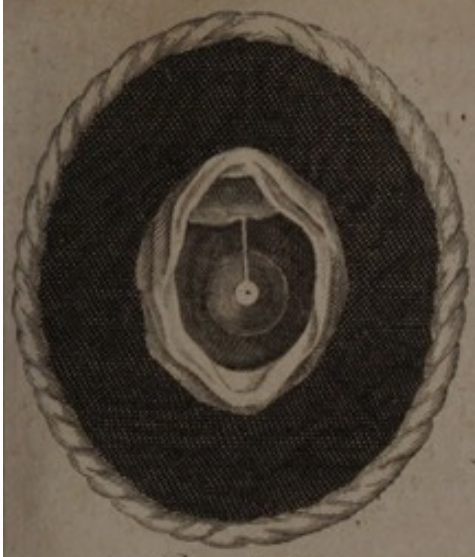
At the time the ovum, or rudiments of the embryo, deſcends into the uterus, it is indeed very minute; and for the firſt ſix days appears to partake of the nature of cream; after this period, in the ſpace of nine days, it aſſumes a blood colour, with

a de-

a degree of conſiſtence; and at the end of twelve enſuing days, it is ſo far altered that we may partly diſcover the firſt lineaments of the fœtus, though ſmall and imperfect, being then only about the ſize of a houſe fly. Two little veſſicles appear in an almoſt tranſparent jelly; the largeſt of which is intended to become the head of the fœtus, and the other ſmaller one is deſtined for the trunk; but neither the limbs nor extremities are yet to be ſeen; the umbilical chord appears only as a minute thread, and the placenta, which only reſembles a cloud above, has no ramifications, or appearances of blood-veſſels; but in proportion as this tranſparent and delicate jelly thickens, it loſes its tranſparency, and there appears diſtinguiſhable in it a little ſpeck, more firm, though opaque, which differs from a cartilage, and already partakes of the nature of bones, but without hardneſs. The ſpeck may be termed the nucleus of the bone, which is going to form the centre from which oſſification proceeds, till it reaches the circumference. Here it is to be obſerved, that four elements introduce into the compoſition of the body ſuch parts as are correſpondent to heat and moiſture, hardneſs and elaſticity. This ſtate of the embryo is expreſſed in the ſecond figure of the annexed plate.

Towards the end of the ſecond month, the fœtus is upwards of an inch in length, and the features of a face begin to be evolved. The noſe appears like a ſmall prominent line; and we are able to diſcover another line under it, which is deſtined for the ſeparation of the lips. Two black points appear in the place of eyes, and two minute holes mark the formation of the ears. At the ſides of the trunk, both above and below, we ſee four minute protuberances, which are the rudiments of the arms and legs, and are diſpoſed of according to the threefold dimenſions of length, breadth, and depth; the fœtus then continues to

collect



Conception.

First Month.

Second Month.

Third Month

Fourth Month.

Formation of the Human Fœtus.

collect ſtrength in the bony germ, by which we are enabled to judge what will be the form of the bones when they ſhall have arrived to perfection. In the ſmall ſimple bones, is to be diſcovered only one ſingle nucleus: in the greater, and in ſuch as are groſs and angular, we find ſeveral ſpringing in different places from the primitive cartilage; but in this laſt caſe, the number of pieces of which the bone is to be compoſed is the ſame as that of the nuclei; and all theſe pieces are perfectly arranged and proportioned. In the bones of the ſkull, the round nucleus appears at firſt in the centre of every piece, and the oſſification extends afterwards in all directions, by means of an infinite number of fibres which the bony ſpeck ſends forth in form of rays, which lengthen, thicken, and harden; and, by degrees, unite by a membraneous contexture. This is the firſt epoch of oſſification: the veins alſo of the placenta are now partly viſible, as may be ſeen in No. 3 of the annexed plate.

In the third month, the human form may be decidedly aſcertained; all the parts of the face can be diſtinguiſhed: the ſhape of the body is clearly marked out; and the haunches and the abdomen are elevated, and the hands and feet are plainly to be diſtinguiſhed. The upper extremities are obſerved to increaſe faſter than the lower ones; and the ſeparation of the fingers may be perceived before that of the toes; and all the parts in general aſſume a form more perfect and more diſtinct in proportion as the oſſification progreſſively gains upon the whole cartilage, and according to the greater or leſs vivacity which characterizes the fœtus before it ſees the light. The veins of the placenta are now diſtended, and are ſeen to communicate with the umbilical tube. This ſtate of geſtation is faithfully delineated in No. 4 of the annexed engraving.

In the fourth month, the fœtus ſeems to be completed

pleted in all its parts, and is about four inches in magnitude. The fingers and toes, which at firſt coaleſced, are now ſeparated from each other, and the inteſtines appear, in all their windings and convolutions, like little threads; and the ſecond epoch of oſſification is beginning to take place, and what remains cartiliginous of the newly formed bone of the fœtus diminiſhes, and the bony part formed by the firſt epoch of oſſification advances gradually to perfection. The veins of the placenta begin to be filled with blood, and the umbilical chord is conſiderably enlarged; as may be ſeen in the fifth figure of the ſubjoined plate.

In the fifth month, the bodily conformation being perfected, the ſmall bones which conſtitute the organ of hearing, acquire firmneſs and ſolidity much faſter than thoſe of any other part of the fœtus; and a complete circulation of the blood having been induced, the mother quickens. The fœtus now aſſumes a more upright figure, which correſponds with the ſhape of the uterus. Its head is found more elevated, its lower extremities are more diſtended, its knees are drawn upwards with its arms reſting upon them. It now meaſures from ſeven to eight inches in length, and is deſcribed in the firſt figure of the ſecond ſubjoined plate.

Towards the end of the ſixth month, the fœtus begins to vary its poſition in the uterus, and will frequently be found to incline either to the right or the left ſide of the mother; for the head is much too large for the other parts of the body, and although the head be ſoft and flexible, yet its internal ſurface is interſected by a great number of furrows, canals, and inequalities; and by examining the bones of the other parts of the body may be perceived a great number of veſſels which convey to them the marrow and nutritive juices. It will by this time be increaſed to nine or ten inches; and its uſual poſture after quickening may

be

Fifth Month.

Sixth Month.

Seventh Month.

Eighth Month

Ninth Month.

Formation of the Human Fœtus.

be ſeen in the ſecond figure of the ſeeond annexed plate.

In the ſeventh month, the child acquires ſtrength and ſolidity, as may be demonſtrated by thoſe painful throes and twitchings which its mother feels from time to time. The bones now acquire ſolidity, and the cavity of the ſkull is viſibly fitted to the maſs of the ſubſtance which it contains. Thus the exterior form of the brain, which imprints itſelf perfectly on the internal ſurface of the ſkull, is at the ſame time the model of the contours of the exterior form; and the conjunction of the ſeveral parts of the ſkull produces afterwards thoſe indented ſeams ſo juſtly the object of admiration. It is not impoſſible for children to live if born at this time, but it is not frequent. I have attended labours of this deſcription, where it has been the caſe; but the child ſeldom or never meaſures more then eleven or twelve inches.

In the eighth month, the whole human economy is complete; the arteries and nerves appear viſible, and nature only requires its due time to ſtrengthen the muſcular ſyſtem, which advances daily to a ſtate of perfection: it is poſſible, by an extenſive practice, to determine the age of the fœtus by the inſpection of its bones, &c. In this month, the external ſurface of its body is interſected by a great number of furrows, canals, and inequalities, by the continual preſſure of the blood in its revolution through the arteries and veins. It meaſures from fourteen to ſixteen inches; and in the ninth month, or towards the end of its full time, it is increaſed from eighteen to twenty-two inches, or more; when the head, by becoming ſpecifically heavier than the other parts, is gradually impelled downwards, and falling into the birth, brings on what is termed the pains of parturition, or natural labour. For the exact poſition of the fœtus in the uterus during theſe laſt three months,

as well as the former, see the corresponding figures in the two annexed engravings, the whole of which were correctly drawn from real fœtuses, extracted from the uterus of different women, and are now preserved for the inspection of the curious, in Rackstrow's Museum, to which I beg leave to refer the inquisitive reader*.

The nourishment of the fœtus during all this time is derived from the placenta, about six inches diameter, and the funis, twenty-seven inches, which is originally formed out of that part of the ovum next the fundus uteri. The remaining part of the ovum is covered by a membrane, called *spongy chorion;* within that is another, called *true chorion*, which includes a third, termed *amnios:* this contains a liquor, or watery fluid, in which the fœtus floats till the time of its birth. Before the child acquires a distinct and regular form, it is called *embryo;* but from the time all its parts become visible it takes and retains the name of *fœtus* till its birth. During the progress of impregnation, the uterus suffers considerable changes; but though it enlarges as the ovum increases, yet, in regard to its contents, it is never full; for in early gestation these are confined to the fundus only; and though the capacity of the womb increases, yet it is not mechanically stretched, for the thickness of its sides do not diminish; there is a proportional increase of the quantity of fluids, and therefore pretty much the same thickness remains as before impregnation. The gravid uterus, or pregnant womb, is of different sizes in different women, and must vary ac-

* The fœtus is observed to be of the following different weights, according to Mauriceau, a famous French physician: from the first day of conception, it cannot weigh more, or be bigger, than a millet-seed; at ten days, it weighs half a grain; at one month, half a drachm; at three months, three ounces; at seven months, four pounds; at eight months, from seven to eight pounds; but at nine months, about twelve pounds.

cording

cording to the bulk of the fœtus and involucra. The ſituation will alſo vary according to the increaſe of its contents, and the poſition of the body. For the firſt two or three months, the cavity of the fundus is triangular, as before impregnation; but as the uterus ſtretches, it gradually acquires a more rotund form. In general, the uterus never riſes directly upward, but inclines a little obliquely, moſt commonly to the right ſide: its poſition, however, is never ſo oblique as to prove the ſole cauſe either of preventing or retarding delivery; its increaſe of bulk does not ſeem to ariſe merely from diſtention, but to depend on the ſame cauſe and increaſe as the extenſion of the ſkin in a growing child. This is proved from ſome late inſtances of extra-uterine fœtuſes, where the uterus, though there were no contents, was nearly of the ſame ſize, from the additional quantity of nouriſhment tranſmitted, as if the ovum had been contained within its cavity. The internal ſurface, which is generally pretty ſmooth, except where the placenta adheres, is lined with a tender efflorescence of the uterus, which after delivery appears as if torn, and is thrown off with the cleanſings. This is the *membrana decidua* of Dr. Hunter; which he deſcribes as a lamella from the inner ſurface of the uterus; though Signor Scarpa, with more probability, conſiders it as being compoſed of an inſpiſſated coagulable lymph.

Though the uterus, from the moment of conception, is gradually diſtended, by which conſiderable changes are occaſioned, it is very difficult to judge of pregnancy from appearances in the early months. For the firſt three months the os tincæ feels ſmooth and even, and its orifice as ſmall as in the virgin ſtate. When any difference can be perceived, about the fourth or fifth month, from the deſcent of the fundus through the pelvis, the tubercle, or projecting part of the os tincæ will ſeem larger,

and more expanded; but after this period it ſhortens, particularly at its fore-parts and ſides, and its orifice or labia begin to ſeparate, ſo as to have its conical appearance deſtroyed. The cervix, which in the early months is nearly ſhut, now begins to ſtretch and to be diſtended to the os tincæ; but, during the whole term of utero-geſtation, the mouth of the uterus is ſtrongly cemented with a ropy mucus, which lines it and the cervix, and begins to be diſcharged on the approach of labour. In the laſt week, when the cervix uteri is completely diſtended, the uterine orifice begins to form an elliptical tube, inſtead of a fiſſure, or to aſſume the appearance of a ring on a large globe; and often at this time, eſpecially in pendulous bellies, diſappears entirely, ſo as to be out of the reach of the finger in touching. Hence the os uteri is not in the direction of the axis of the womb, as has generally been ſuppoſed.

About the fourth, or between the fourth and fifth, month, the fundus uteri begins to riſe above the pubes or brim of the pelvis, and its cervix to be diſtended nearly one-third. In the fifth month the belly ſwells like a ball, with the ſkin tenſe, the fundus about half-way between the pubes and navel, and the neck one-half diſtended. After the ſixth month, the greateſt part of the cervix uteri dilates, ſo as to make almoſt one cavity with the fundus. In the ſeventh month, the fundus advances as far as the umbilicus. In the eighth, it reaches midway between the navel and ſcrobiculus cordis; and in the ninth, to the ſcrobiculus itſelf, the neck then being entirely diſtended, which, with the os tincæ, becomes the weakeſt part of the uterus. Thus, at full time, the uterus occupies all the umbilical and hypogaſtric regions; its ſhape is almoſt pyriform, that is, more rounded above than below, and having a ſtricture on that part which is ſurrounded by the brim of the pelvis. The appendages of the

uterus

The Amnios. B. *The external part of the Placenta covering the Amnios,*
Placenta Uterina. D. *Umbilical Vessel from the Placenta to* E. *the*
Liver of the Foetus.

W. Newman fe

uterus ſuffer very little change during pregnancy, except the ligamenta lata, which diminiſh in breadth as the uterus enlarges, and at a full time are almoſt entirely obliterated.

I ſhall now endeavour to deſcribe the action of quickening, or mode by which life is communicated to the child in the uterus, which uſually takes place in the fifth month of pregnancy. Opportunities, however, of diſſecting the human gravid uterus at or near this critical juncture occurring but ſeldom, it is with great difficulty that a ſubject of this delicate and abſtruſe nature can be treated with perſpicuity, and is the principal cauſe why it has not been attempted by former phyſiologiſts. I have already ſhewn, that the rudiments of the embryo puts forth four membranes, viz. the placenta, the navel-ſtring, the chorion, and amnios (ſee the plate) that contain the fluid abovementioned, in which the fœtus floats. Until the period of quickening arrives, the embryo poſſeſſes only vegetative life, ſimilar to that of a common plant; and its growth is nouriſhed and preſerved by the fluid in which it ſwims, until the nerves, veins, arteries, and vital organs, are entirely formed, and the circulation of its mother's blood is completed through them, which is conducted in the following manner:

The placenta is the medium by which the blood from the heart of the mother is communicated to that of the child; but to check its too rapid progreſs, which would overwhelm the tender veſſels of the infant frame, the texture of the placenta is formed ſimilar to that of a ſponge, round like a cake, of conſiderable dimenſions, and capable of great abſorption, being chiefly made up of the ramifications of the umbilical arteries and veins, and partly of the extremities of the uterine veſſels. The arteries of the uterus diſcharge their contents into the ſubſtance of this cake: and the veins of the

the placenta, receiving the blood either by a direct communication of veſſels, or by abſorption, at length form the umbilical vein, which paſſes on to the ſinus of the vena porta, and thence to the vena cava and heart of the infant, by means of the canalis venoſus, a communication which is cloſed up in the adult. But the circulation of the blood through the heart is not conducted in the fœtus as in the adult: in the latter, the blood is carried from the right auricle of the heart through the pulmonary artery, and is returned to the left auricle by the pulmonary vein; but a dilatation of the lungs is eſſential to the paſſage of the blood through the pulmonary veſſels, and this dilatation cannot take place till after the child is born, and has reſpired. This deficiency is therefore ſupplied in the fœtus by an immediate communication between the right and left auricle, through an oval opening in the ſeptum which divides the two auricles, called *foramen ovale*. The blood in the fœtus is likewiſe tranſmitted from the pulmonary artery to the aorta, by means of a duct, called *canalis arterioſus*, which, like the canalis venoſus and foramen ovale, gradually cloſes after birth. The blood is returned again from the fœtus to the mother, through two arteries, called umbilical arteries, which ariſe from the iliacs. Theſe two veſſels, taking a winding courſe with the vein, form with that, and the membranes by which they are ſurrounded, what is called the umbilical chord. Theſe arteries, after ramifying through the ſubſtance of the placenta, diſcharge their blood into the veins of the uterus, in the ſame manner as the uterine arteries diſcharge their blood into the branches of the umbilical vein. So that, after quickening, the blood of the mother is conſtantly paſſing in at one ſide of the placenta, and out again at the other, for the nouriſhment of the child.

Now what we call the *action of quickening* is that inſtantaneous

inſtantaneous, yet undeſcribable motion of the vital principle, which, the inſtant the fœtus has acquired a ſufficient degree of animal heat, and is completely formed in all its parts, ruſhes like an electric ſhock, or flaſh of lightening, conducted by the ſanguiferous and nervous fluids, from the heart and brain of the mother, to the heart and brain of the child. At this moment the entire circulation begins; the infant fabric is completely ſet in motion and the child becomes a living *ſoul*. As ſoon, therefore, as the circulation commences, the child ſtarts into life; and the inſtant the circulation ceaſes, life ceaſes alſo. This *act of quickening* is therefore derived from the blood, and is ſo ſenſibly felt by the mother, that ſhe often faints, and feels an internal depreſſion of her animal and vital powers, which may be ſaid, in ſome meaſure, to have departed from her. But the act of quickening does not take place in all women at the ſame period, nor always in the ſame woman at the ſame diſtance of time from her conception; nor is it governed by any given number of weeks or days after conception has taken place; but depends entirely on that inſtant of time when the joint influence of animal heat, and an entire completion of the nerves, veins, arteries, and other parts and organs, of the fœtus, are fitted and ready to receive and ſupport a due circulation of the blood and juices; for this, and this alone, is the ſource of quickening, and the beginning of animal life. Strong and healthy women will therefore quicken ſooner than the weak and delicate, by reaſon that their procreative and ſtimulative powers are more robuſt, and can ſooner contribute that portion of animal heat which is neceſſary to the entire completion of the fœtus in all its parts; and which will happen ſooner or later, according to the health and ſtrength of the pregnant woman, and her ſufficiency of menſtrual blood to ſupport the demand. For this

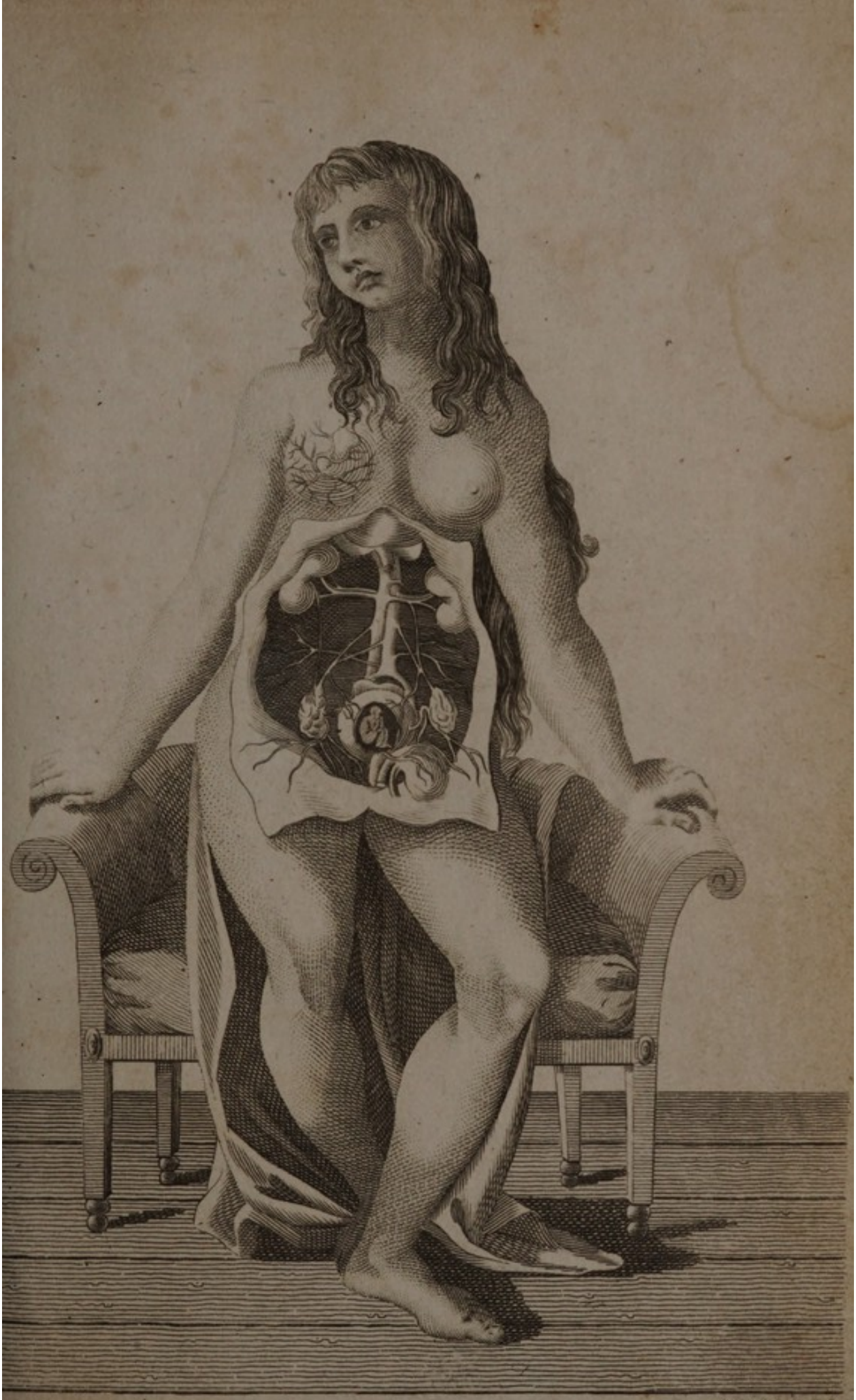
flux

flux will now be wholly taken up by the new ſubject, until the hour of birth; after which it either renews its monthly evacuation, as being redundant in the mother; or, if ſhe ſuckles the child, it is then determined to the mammæ, and is converted into milk.

Such is this curious and moſt admirable contrivance of nature, for the reproduction and propagation of mankind; and ſuch the nature and event of that myſterious action of quickening, which has hitherto been involved in ſo much darkneſs and obſcurity, as to lead the unthinking multitude to ſuppoſe, that giving life to the fœtus, was in every inſtance a new and diſtinct interpoſition of the Deity, inſtead of religiouſly imputing it to that primary exertion of his omnipotence, which in the original formation of Adam, implanted in his nature the power of reproducing his like, and of imparting life and ſoul to his ſpecies, by a fixed and immutable decree, to be continued down from father to ſon, to the final end and conſummation of this ſublunary world. If the ſeed of Adam had not been originally endued with the gift of imparting life and ſpirit to his future generations, how could the ſouls of his deſcendants be ſubjected to original ſin? Were any one child, deſended from the race of Adam, to receive the gift of life and ſoul from a ſubſequent exertion of the power of GOD, it would become a new and diſtinct act of creation, and the offſpring could not poſſibly be contaminated by the fall, nor be ſubjected to the miſeries and misfortunes reſulting from it, as having received its being from an independent cauſe.

I have, to the beſt of my ability, endeavoured to illuſtrate this occult proceſs of nature, by means of the annexed copperplate engraving, taken from a drawing of the viſcera and uterus of an unfortunate female, who fainted and died at the time of quickening; the fœtus itſelf being now preſerved

in



W. Newman Sculp.t

The Action of Quickening.

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in ſpirits. The ſtructure of the gravid uterus is, however, extremely difficult to be ſhewn, and the more ſo under theſe peculiar circumſtances. In the uterus of women who die after this period, or at the time of labour, or ſoon after delivery, fibres running in various directions are obſervable, more or leſs circular, that ſeem to ariſe from three diſtinct origins, namely, from the place where the placenta adheres, and from the aperture and orifice of each of the tubes; with all the veins and veſſels communicating to and from the placenta and the mother ſurcharged with blood; but it is almoſt impoſſible to demonſtrate regular plans of veſſels and fibres, continued to any length, without an interruption which involves us in doubt, and deſtroys that view of the admirable connection which nature has formed between the vital organs of the mother and child in a ſtate of advanced pregnancy.

The various diſeaſes incident to the uterine ſyſtem, and other morbid affections of the abdominal viſcera, in weak and ſickly females, will frequently excite the ſymptoms, and aſſume the appearance, of real pregnancy. Complaints ariſing from a ſimple obſtruction are ſometimes miſtaken for thoſe of breeding; when a tumour about the region of the uterus is alſo formed, and gradually becomes more and more bulky, the ſymptoms it occaſions are ſo ſtrongly marked, and the reſemblance to pregnancy ſo very ſtriking, that the ignorant patient is often deceived, and even the experienced phyſician impoſed on.

Schirrous, polypous, or ſarcomatous tumors, in or about the uterus or pelvis; dropſy or ventoſity of the uterus or tubes; ſteatoma or dropſy of the ovaria, and ventral conception, are the common cauſes of ſuch fallacious appearances. In many of theſe caſes the menſes diſappear; nauſea, retchings, and other ſymptoms of breeding, enſue; fla-

tus in the bowels will be miſtaken for the motion of the child; and in the advanced ſtages of the diſeaſe, from the preſſure of the ſwelling on the adjacent parts. Tumefaction, and hardneſs of the breaſts ſupervene, and ſometimes a viſcid or ſerous fluid diſtils from the nipple; circumſtances that ſtrongly confirm the woman in her opinion, till time, or the dreadful conſequences that often enſue, at laſt convince her of her fatal miſtake.

Other kinds of ſpurious gravidity, leſs hazardous in their nature than any of the preceding, are commonly known by the names of *falſe conception* and *moles*: the former of theſe is nothing more than the diſſolution of the fœtus in the early months; the placenta is afterwards retained in the uterus, and from the addition of coagula, or in conſequence of diſeaſe, is excluded in an indurated or enlarged ſtate; when it remains longer, and comes off in the form of a fleſhy or ſchirrous-like maſs, without having any cavity in the centre, it is diſtinguiſhed by the name of *mole*. Mere coagula of blood, retained in the uterus after delivery, or after immoderate floodings at any period of life, and ſqueezed by the preſſure of the uterus, into a fibrous or compact form, conſtitute another ſpecies of mole that more frequently occurs than any of the former. Theſe, though they may aſſume the appearances of gravidity, are generally, however, expelled ſpontaneouſly, and are ſeldom followed with dangerous conſequences. But, when two or more of the ova deſcend into the uterus, and attach themſelves ſo near one another, as to adhere, in whole or in part, as to form only one body, with membranes and water in common, this body will form a confuſed irregular maſs, which is called a *monſter*; and thus a monſter may be either defective in its organic parts, or be ſupplied with a ſupernumerary ſet of parts derived from another ovum. This proceeds from a defect or accident in nature,

nature, which it is entirely beyond the power of medicine to rectify or prevent.

It would ſeem, however, from a due contemplation of the foregoing facts, from the frame and ſtructure of females, and from the ultimate end and purpoſe of their conformation, that almoſt every malady reſulting from a ſtate of pregnancy, except the laſt-mentioned, may be in a great meaſure prevented or removed. The natural temperature of women differs in a very conſiderable degree from that of men, inaſmuch as their blood and juices are determinded to a peculiar and diſtinct purpoſe; and hence it is that obſtructions of the menſes, their exceſs, or privation of the office intended them, conſtitute thoſe peculiar maladies which we term *Diſeaſes of Women.* The natural temperature of the male is *hot* and *dry;* that of the female, *cold* and *moiſt.* The action of the procreative tincture of man is SOLAR, i. e. of a heating and quickening faculty; that of the woman is LUNAR, i. e. of a cold and vegetative quality. As the ſun heats and gives prolific energy to the fruits of the earth, ſo man fecundates and gives life to the prolific tincture of the woman. Thus the female, as the microcoſm, or epitome of the celeſtial ſyſtem, poſſeſſes an inherent ſimilitude with the moon, vegetates and brings forth the fruit of her womb, and not only feels the influence and ſympathy of that luminary in her monthly diſcharges, but in all the travail and viciſſitudes of pregnancy*. To the ſame ſource likewiſe we trace the cauſe, and decide the queſtion, whether the fruit of the uterus be male or female? for, if the male ſeed be predominant, heat will abound, and a male fœtus will be gene-

* A proof of this observation is found by females being often out of their reckoning; for if the moon be swift in motion at the time of conception, the child will be born within nine calender months; if slow in motion, the mother will *appear* to go longer than her time; but if in her mean motion, then she will go her exact period.

rated; but, if the cooling moiſture of the woman overcome the maſculine heat of the male ſeed, a female is then produced. The old and exploded notion of this cauſe depending on the child's falling to the right or left ſide of the mother, is too abſurd to weigh a moment on the mind of any reaſonable enquirer.

We diſcover likewiſe that the male, being conſtituted of the Solar temperature, is naturally ſubjected to thoſe infirmities of body and mind, which reſult from the elements of fire and earth; while thoſe of the female are of Lunar tendency, ariſing from the elements of water and air. Of theſe four elements our groſs or material part is formed, and by their due and proper commixture in the conſtitution, or circulating maſs, are life and health eſtabliſhed; whilſt, on the contrary, by their diſcordant, defective, or predominant power, diſeaſe and death are produced. Now the male abounding in heat, and the female in moiſture, is the reaſon why many diſorders incident to man are alleviated by contact with the woman; as thoſe of the woman are by contact with the man. In the grand ſcale of nature, we find the meridian heat and ſcorching rays of the ſun to be qualified and corrected by the cooling moiſture and mild influence of the midnight moon; but when either of theſe are obſtructed in their effect, by the intervention of accidental cauſes, by ſtorms, by tempeſts, or unſeaſonable blaſts, we then endeavour to repreſs by art the evil conſequences that are likely to enſue. Juſt ſo in the human economy, the grand purpoſe and deſign of medicine is to correct and modify the diſcordant elements in the conſtitution, and to give that vigour and tone to the vital powers, which conſtitute the genuine principle of health and life.

From what has been ſuggeſted, we might ſafely infer, that the conſtitution and temperature of the female

female requires a medicine of an oppoſite action and tendency to that adapted to the male, and which ought to be compounded of elements congenial to the intentions of nature, calculated to purge the uterus, to purify the ſeminal fluid, and give ſtimulus to the *catamenia*; which, if not put in motion by the functions of nature, becomes dull and ſtagnant, and vitiates the whole circulating maſs; whence thoſe diſorders, peculiarly incident to the moſt amiable, as being the moſt virtuous, of women, are confeſſedly derived; and for the cure and prevention of which, a peculiar and diſtinct remedy has long been wanting.

Theſe, and other conſiderations, influenced by the known power of the ſecond cauſes, and their faculty of acting upon the mechaniſm of the human frame, induced me to attempt the chemical preparation of two ſubtile Tinctures, conſtituted of a co-mixture of the pureſt elements of which our blood is compoſed, and adapted to the peculiar temperature and conſtitutions of the oppoſite ſexes. That intended for the uſe of Man, I call the SOLAR TINCTURE, as being congenial to the ſeminal functions and vital principles of his conſtitution. That adapted to Woman, I call the LUNAR TINCTURE, as being calculated to act upon the menſtrual and vegetative fluids, and as being compounded of thoſe elements which make up the frame and temperature of her body. The invention of theſe Tinctures has been the reſult of a long and laborious application to the ſtudy of univerſal nature; of the properties of fire, air, earth, and water, in the propagation of animal and vegetable life, and in the compoſition of medicine; in which, though theſe elements form the PABULUM of the univerſe, yet the art of collecting, uniting, and aſſimilating them with the vital fluids, ſeems to be unknown among modern chymiſts, and hath eſcaped the obſervation of medical ſcience. The

fixidity

fixidity of these Tinctures at once establishes their power and efficacy beyond all others; for they can never be affected by change of weather or climate, nor by heat or cold; nor will they suffer any diminution of strength or virtue by remaining open, or uncorked; a circumstance which cannot be affirmed of any other fluid at present known throughout the world.

I shall now proceed to shew the action of the Lunar Tincture on female constitutions; and as this medicine is only intended to remedy such complaints as particularly relate to pregnancy, and the menstrual discharge, I shall omit to notice any other maladies, until I come to treat of the Solar Tincture; which though essentially directed to give tone and vigour to the constitution of the male, is nevertheless equally efficacious to the female in removing all disorders of the blood and lymph which are alike common to valetudinarians of both sexes. No complaint in the female habit, therefore, comes under our present enquiry, till at or near the age of puberty. Until this important period of the sex arrives, the rules heretofore laid down in the Medical Part of my Family Physician, for the management and future health of young ladies, deserve a very close and serious attention. The evident distinction between the male and female in their structure and design, in their bodily strength and vigour, and in the procreative fluids, demands the utmost attention from themselves, and the tendereſt care from the physician. Nor can we too often nor too earnestly caution parents and guardians against the evils of that absurd though fashionable style of bringing up young ladies, by confining them almost entirely to their apartments, keeping them on poor low diet, and using artificial means to make them spare and delicate, which contribute more to their prejudice than all the incidental diseases to which they are otherwise subject. These refinements in a

female

female education, beſides deſtroying their ruddy complexion (which is often the deſign of it) relaxes their ſolids, impoveriſhes their blood, weakens their minds, and diſorders all the functions of their body, whereby they are often rendered incapable of conception, and denied the felicity of becoming mothers. On the contrary, it ought to be the ſtudy, as it certainly is the duty, of all that have girls under their care, to indulge them in every innocent diverſion, and in every active exerciſe, which can give freedom to the limbs, or agility to the body; as all theſe have a natural tendency to exhilarate their ſpirits and promote digeſtion, to ſtimulate their blood and juices, and, at the proper age, to bring on a free and eaſy diſcharge of the menſtrual flux.

Though it be univerſally admitted, that this flux is abſolutely neceſſary to nouriſh and ſupport the fœtus, and that without it human generation cannot be carried on; and that it is conſequently and obviouſly peculiar to the female uterine ſyſtem; yet it is curious to obſerve the various abſurd and contradictory opinions ſome phyſicians have laboured to eſtabliſh, merely, one might ſuppoſe, to bewilder the underſtanding, and ſubject delicate females ſtill more to that erroneous or miſguided treatment, by which their health, their life, and every earthly bleſſing, is too frequently deſtroyed.

Dr. Bohn and Dr. Freind inſiſt that this flux is nothing more than a plenitude of the common maſs of blood, which nature throws off only for relief againſt the too abundant quantity. Dr. Freind ſuppoſes that this plenitude ariſes from a coacervation in the blood-veſſels of a ſuperfluity of aliment, which, he thinks, remains over and above what is expended by the ordinary ways; and that women have this plethora, and not men, becauſe their bodies are more humid, and their veſſels, eſpecially the extremities of them, more tender, and their manner

manner of living generally more inactive than that of men; and that theſe things concurring are the occaſion that women do not perſpire ſufficiently to carry off the ſuperfluous alimentary parts, till they be accumulated in ſuch quantities as to diſtend the veſſels, and force their way through the capillary arteries of the uterus. It is ſuppoſed to happen to women more than to the females of other ſpecies, which have the ſame parts, becauſe of the erect poſture of the former, and the vagina and other canals being perpendicular to the horizon; ſo that the preſſure of the blood is directed towards their orifices; whereas in brutes, they are parallel to the horizon, and the preſſure wholly is on the ſides of the veſſels. The diſcharge, he thinks, happenes in this rather than in any other, as being favoured more by the ſtructure of the veſſels; the arteries being very numerous, and the veins ſinous and winding, and therefore more apt to retard the impetus of the blood; and conſequently, in a plethoric caſe, to occaſion the rupture of the extremities of the veſſels, which may laſt, till, by a ſufficient diſcharge, the veſſels are eaſed of their overload. To this he adds the conſideration of the ſoft pulpous texture of the uterus, and the vaſt number of veins and arteries with which it is filled. Hence a healthy maid being arrived at her growth, begins to prepare more nutriment than is required for the neceſſary ſupport of the body; which as there is not to be any farther accretions, muſt of neceſſity fill the veſſels, and eſpecially thoſe of the uterus and breaſts, they being the leaſt compreſſed. Theſe will be dilated more than the others; whence, the lateral vaſcules evacuating their humours into the cavity of the uterus, it will be filled and extended. Hence a pain, heat, and heavineſs, will be felt about the loins, pubes, &c. the veſſels of the uterus, at the ſame time, will be ſo dilated as to emit blood into the cavity of the uterus,

uterus, and its mouth will be lubricated and looſened, and blood iſſue out. As the quantity of blood is diminiſhed, the veſſels will be leſs preſſed, and will contract themſelves cloſer, ſo as again to retain the blood, and let paſs the groſſer part of the ſerum, till at length only the uſual ſerum paſſes. Again, there are more humours prepared, which are more eaſily lodged in veſſels once dilated; and hence the menſes go and return at various periods in various perſons.

This hypotheſis is judiciouſly oppoſed by Dr. Drake, who maintains, that there is no ſuch plenitude, or at leaſt that it is not neceſſary to menſtruation; arguing, that if the menſes were owing to a plethora ſo accumulated, the ſymptoms would ariſe gradually, and the heavineſs, ſtiffneſs, and inactivity, neceſſary ſymptoms of a plethora, would be felt long before the periods were completed, and women would begin to be heavy and indiſpoſed ſoon after evacuation, and the ſymptoms would increaſe daily; which is contrary to all experience. Many women, who have them regularly and eaſily, have no warning, nor any other rule to prevent an indecent ſurpriſe, than the meaſure of time; in which, ſome that have ſlipped, have been put to confuſion and ſhifts no way conſiſtent with the notice a plethoric body would give. He adds, that even in thoſe who are difficultly purged this way, the ſymptoms, though very vexatious and tedious, do not make ſuch regular approaches as a gradual accumulation neceſſarily requires. If we conſider what violent ſymptoms come on in an hour, we ſhall be extremely puzzled to find the mighty acceſſion of matter which ſhould, in an hour or a day's time make ſuch great alterations. According to the hypotheſis, the laſt hour contributed no more than the firſt; and of conſequence, the alteration ſhould not be greater in the one than in the other, ſetting aſide the bare eruption.

There are others who give into the doctrine of fermentation, and maintain the evacuation in those parts to be an effect of an effervescence or ebullition of the blood. This opinion has been maintained by Drs. Charleton, Bale, De Graaf, and Drake; the two first of whom suppose a ferment peculiar to the women, which produces this flux, and affects that part only, or at least principally. De Graaf, less particular in his notion, only supposes an effervescence of the blood, raised by some ferment, without assigning how it acts or what it is. The sudden turgescence of the blood occasioned them all to think that it arose from something till then extraneous to the blood, and led them to the parts principally affected to seek for an imaginary ferment, which no anatomical enquiry could ever shew, or find any receptacle for, nor any reasoning necessarily infer. Again, that heat which frequently accompanies this turgescence led them to think the case more than a plethora, and that there was some extraordinary intestine motion at that time.

Dr. Drake contends that it is not only necessary there should be a ferment, but a receptacle also for this ferment; concluding from the suddenness and violence of these symptoms, that a great quantity must be conveyed into the blood in a short time, and consequently that it must have been ready gathered in some receptacle, where, whilst it was lodged, its action was restrained. He pretends to ascertain the place both of the one and the other, making the gall-bladder to be the receptacle, and the bile the ferment. The liquor he thinks well adapted to raise a fermentation in the blood, when discharged into it in quantity; and, as it is contained in a receptacle that does not admit of a continual issue, it may be there reserved, till in a certain period of time, the bladder becoming turgid and full, through the compression of the incumbent viscera, it emits the gall; which, by the way of the lacteals, insinuating

ating itſelf into the blood, may raiſe an effervescence that occaſions the aperture of the uterine arteries. To confirm this, he alleges that perſons of a bilious conſtitution have the menſes either more plentifully or more frequently than others; and that diſtempers manifeſtly bilious are attended with ſymptoms reſembling thoſe of women labouring under difficult menſtruation. Should this argument, however, be admitted, men would have the menſes as well as women. But to this he anſwers, that men do not abound in bile ſo much as women, the pores of the former not being ſo open, and carrying off more of the ſerous part of the blood, which is the vehicle of all other humours, and conſequently a greater part of each is diſcharged through them than in women, wherein the ſuperfluity muſt either continue to circulate with the blood, or be gathered into proper receptacles, which is the caſe in the bile. The ſame reaſon he gives why menſtruation ſhould not be in brutes: the pores of theſe being manifeſtly more open than thoſe of women, as appears from the quantity of hair, for the vegetation of which, a larger cavity, and a wider aperture of the glans, are neceſſary, than where no ſuch thing is produced: there is yet ſome difference between the males and females even among theſe, ſome of the latter having their menſes, ſuch as the oran-outang, &c. though not ſo often, nor in the ſame form and quantity, as women. But without dwelling on theſe abſtract reaſonings, the abſurdity of which will be obvious to every perſon who turns to the foregoing ſyſtem of human impregnation, we need only remark, that there are two critical periods in every woman's life which completely deſtroys this hypotheſis. Theſe are, that at the age of fourteen or fifteen the menſes begin to flow; but ſubſide at the age of forty or fifty. At their commencement, we often find the difficulty, and conſequent diſeaſe, ariſes from their *deficiency*;

whereas, according to the foregoing doctrine, they would then *always* flow with the greateſt freedom. At the period when they ſhould ceaſe, they are apt to come in ſuch abundance as to bring on a flooding, which not only endangers, but too frequently deſtroys, life; a fatal conſequence that could not poſſibly happen, were the above arguments true.

OF FEMININE OR LUNAR DISEASES.

THAT the vegetative or procreative faculties of women are univerſally governed by the lunations of the moon, their own experience, as well as the demonſtrations given in my Treatiſe on the Occult Sciences, indiſputably prove. The firſt ſhow of the catamenia, if it be natural, invariably comes with the new, full, firſt and laſt quarters of the moon; and this effort of nature is juſtly conſidered as the ſure ſign of a procreating ability, and of complete puberty*. Whenever this ſeaſon arrives, whether early or late, the conſtitution of every female undergoes a conſiderable change, and the greateſt care and attention are then neceſſary, ſince the future health and happineſs of every wo-

* Some females have their catamenia in the full moon, some in the new moon, and some in the wane. This is owing to their several complexions; and although all females, in respect to the male, are phlegmatic, yet some are more sanguine, some more choleric, and some more melancholy, than others. The sanguine, or those females who have the aerial property most predominant in their complexion (when in health) have their monthly discharges at the first quarter of the moon; those who have the fiery property most predominant in their composition, and are choleric, have their menses at the full moon; those of a melancholy temperature, who partake more of the earthly quality, have their monthly courses when the moon arrives at her third quarter; but the phlegmatic, whose complexion participates more of the aqueous property, have such periods of discharge at the new moon. Hence we may conclude, that were females to observe the situation of the moon to the sun, at the first time they have a show of the catamenia, they would be enabled, by a proper regimen, to keep themselves in perfect health, and their temperature in a proper equilibrium.

man

man depend in a great meaſure, upon her conduct at this period. It is the duty of mothers, and of thoſe who are entruſted with the education of girls, to inſtruct them early in the conduct and management of themſelves at this critical moment. Falſe modeſty, inattention, and ignorance of what is beneficial or hurtful at this time, are the ſources of many diſeaſes and misfortunes, which a very little attention might now prevent. Nor is care leſs neceſſary in the ſubſequent returns of this diſcharge. Taking improper food, violent agitations of the mind, or catching cold, is often ſufficient to ruin the health, or to render the female for ever after incapable of procreation.

In order to eſcape the chloroſis, and other ſimilar diſeaſes incident to young women at the period when the menſes commence, let them avoid indolence and inactivity, and accuſtom themſelves to exerciſe in the open air, as much as poſſible. The diſcharge in the beginning is ſeldom ſo inſtantaneous as to ſurprize them unawares. The eruption is generally preceded by ſymptoms that indicate its approach; ſuch as a ſenſe of heat, weight, and dull pain in the loins; diſtenſion and hardneſs of the breaſts, head-ache, loſs of appetite, laſſitude, paleneſs of the countenance, and ſometimes a ſlight degree of fever. When theſe ſymptoms occur, every thing ſhould be carefully avoided which may obſtruct the diſcharge, and all gentle means uſed to promote it: as ſitting frequently over ſteams of warm water, drinking warm diluting liquors, &c. When the menſes have begun to flow, great care ſhould be taken to avoid every thing that tends to obſtruct them; ſuch as ſalt-fiſh, and all kinds of food that are hard of digeſtion, and cold acid liquors. Damps are likewiſe hurtful at this period; as alſo anger, fear, grief, and other affections of the mind. From whatever cauſe this flux is obſtructed, except in the ſtate of pregnancy,

proper

proper means ſhould be inſtantly uſed to reſtore it; and if exerciſe in a dry, open, and rather cool air, wholeſome diet, generous liquors, in a weak and languid ſtate of the body, cheerful company and amuſement, fail, recourſe muſt be had to medicine. In all ſuch caſes, blood-letting muſt be carefully avoided; but let the patient take from twenty to thirty drops of the Lunar Tincture, in a wine-glaſs of warm water or mugwort-tea, every morning before breakfaſt, every day at noon, and every night before going to bed, until the intention be anſwered, which will uſually take place in three or four days, without the aſſiſtance of any other medicine whatever. But it ſometimes happens, in relaxed conſtitutions, that the menſtrual diſcharge, on its firſt appearance, is vitiated, and ſuperabundant; the conſequence of this is, that the patient becomes weak, the colour pale, the appetite impaired, and the digeſtion languid, ſo that dropſy or conſumption is likely to enſue. Effectually to prevent theſe, let the patient be kept two or three days in bed, with her head low; let her obſerve a ſlender diet, principally of white meats; her drink being red-port negus. Every night and morning, for ten or twelve days, let her take one table-ſpoonful of the Solar Tincture, diluted in double the quantity of decoction of nettle-roots, or of the greater comfrey; and after the flux has abated, and her health and ſtrength ſeem to return, let her only take a table-ſpoonful of the Solar Tincture, every day at noon, in a glaſs of cold ſpring-water; which wonderfully contributes to reſtore a due conſiſtency to the circulating maſs, promotes digeſtion, and invigorates the ſpirits. Before the cuſtomary period returns, ſhe muſt diſcontinue the Solar Tincture; and, if there be the leaſt appearance of irregularity or obſtruction, let her again take, night and morning, for two or three days, from twenty to thirty drops of the LUNAR TINCTURE, in a glaſs of mug-

wort-

wort-tea, and ſhe will quickly find a regular habit, and her health amazingly eſtabliſhed. In obſtinate or neglected caſes, where the menſes have ſeceded, and after an irregular appearance, have turned wholly into the habit, both theſe Tinctures ſhould be uſed with a leſs ſparing hand, particularly under circumſtances in any reſpect ſimilar to the following remarkable

CASE.

Being called to the aſſiſtance of a young lady, of fifteen years of age, I was informed her menſes had made an irregular appearance about five or ſix times, coming firſt with the full and then with the new moon, and afterwards at the diſtance of two or three months apart, until they totally diſappeared, and turned back upon the habit. No notice was taken, until the patient was ſeized with a violent bleeding at the noſe, attended with fever and epileptic fits. After being under the care of an eminent phyſician for ſeveral months, who directed veneſection, and almoſt every cuſtomary application, to no kind of purpoſe, the diſorder fixed in her neck, forming a large tumour, the acrimony of which fell upon her lungs, and threw her into ſtrong convulſions.

In this extremity I was ſent for. Perceiving the whole ſyſtem deranged by ſpaſmodic affections, and a locked jaw almoſt finally completed, my firſt object was to relieve the vital organs, by giving force and elaſticity to the circulating maſs. With this view I with difficulty forced the mouth ſufficiently open to adminiſter one table-ſpoonful of the Solar Tincture *undiluted;* and within half an hour, to the aſtoniſhment of her friends, I had the pleaſure of ſeeing every convulſive ſymptom die away, and of hearing the patient's voice, of which ſhe had been totally deprived for upwards of a week before. Two hours after, another ſpoonful of the Solar

Tincture

Tincture was taken, with additional ſucceſs; and the patient afterwards continued this medicine, in the quantity of a table-ſpoonful, in a wine-glaſs of warm water, three times a day, for ſix days, at the expiration of which time her appetite and ſtrength were ſurpriſingly returned; and ſhe was then put under a regular courſe of the Lunar Tincture. Twenty drops, in a wine-glaſs of mugwort-tea, were taken every night and morning, for thirteen ſucceſſive days; and on the morning following, it being the full moon, with which her menſes originally came, ſhe had the conſolation to find that every obſtruction was removed, and that the due courſe of nature was completely re-eſtabliſhed. The glandular ſwellings gradually ſubſided, her natural complexion quickly returned, and ſhe now continues in blooming health, perfectly regular, free from all obſtruction, as well as from every conſequent complaint, thankful for the bleſſings of her recovery, and deſirous of communicating the means to any unfortunate female under ſimilar affliction. Reference concerning this caſe may be had by application to the author.

CHLOROSIS, OR THE GREEN SICKNESS, BY SOME CALLED THE LOVE-FEVER.

This diſeaſe uſually attacks virgins a little after the time of puberty, and firſt ſhews itſelf by ſymptoms of *dyſpepſia*, or bad digeſtion. But a diſtinguiſhing ſymptom is, that the appetite is entirely vitiated, and the patient will eat lime, chalk, aſhes, ſalt, &c. very greedily; while at the ſame time there is not only a total inaptitude to proper food, but it will even excite nauſea and vomiting. In the beginning of the diſeaſe, the urine is pale, and afterwards turbid; the face becomes pale, and then aſſumes a greeniſh colour; ſometimes it becomes livid or yellow; the eyes are ſunk, and have a livid circle round them; the lips loſe their fine red colour;

colour; the pulſe is quick, weak, and low, though the heat is little ſhort of a fever, but the veins are ſcarcely filled; the feet are frequently cold, ſwelling at night, and the whole body ſeems covered with a ſoft tumefaction; the breathing is difficult: nor is the mind free from agitation as well as the body; it becomes irritated by the ſlighteſt cauſes; and ſometimes the patient loves ſolitude, and becomes ſad and melancholy. There is a retention of the menſes throughout the whole courſe of the diſorder, which eventually fixes on the vital organs, and death enſues.

The above complaint indiſputably ariſes from ſtifling or ſuppreſſing the calls of nature at this vernal ſeaſon, or juvenile ſpring of life, when the primary command of GOD, "*increaſe and multiply*," is moſt ſenſibly impreſſed upon the whole human fabric. Every tube and veſſel appertaining to the genital ſyſtem, being now filled with a procreative liquor, excites in the female a powerful, yet perhaps involuntary, irritation of the parts, ſtrongly ſoliciting the means to diſcharge their load by venereal embraces. Theſe from prudential motives being often neceſſarily denied, the prolific tinctures ſeize upon the ſtomach and viſcera, obſtruct and vitiate the catamenia, choke and clog the perſpirative veſſels, whereby the venal, arterial, and nervous fluids become ſtagnant; and a leucophlegmatia, or white flabby dropſical tumour, pervades the whole body, and quickly devotes the unhappy patient to the arms of death. In this manner, I am ſorry to remark, are thouſands of the moſt delicate and lovely women plunged into eternity, in the very bloſſom of life, when female excellence is but budding forth, big with the promiſed fruit of rapture and delight! How much then does it become the duty of parents and guardians, who have daughters or wards in ſituations like theſe, and where no very groſs objection can ariſe, to ſuf-

fer them to marry with the men they love; or otherwiſe to provide ſuitable matches for them; ſince this will effect the moſt rational and moſt natural cure, by removing the cauſes of the complaint all together. If, however, matrimony be not then convenient nor likely in a ſhort time to take place, recourſe muſt forthwith be had to proper regimen, and phyſical aid, otherwiſe delirium or conſumption will quickly enſue. The beſt method of regimen is laid down in my Family Phyſician, page 217, which, if well obſerved, in addition to the following courſe, will generally perform a cure. Take, leaves of mugwort, briony, and pennyroyal, of each a handful; infuſe them four days in two quarts of ſoft water, and then pour off the clear liquor for uſe. Take a gill-glaſs three-parts full, with forty drops of the *Lunar Tincture* added to it, three times a day, viz. morning, noon, and night, till the decoction be all uſed. Then reduce the doſe to thirty drops of the Tincture, in a wine-glaſs of cold ſpring-water, morning and evening, for fifteen days; after which it ſhould be taken only once a day, or every other day, until the patient finds herſelf entirely free from every ſymptom of the diſeaſe. For this malady, it is the only ſpecific hitherto known; it unclogs the genital tubes, purges and cools the uterus and vagina, promotes the menſtrual diſcharge, cleanſes the urinary paſſages, diſſolves viſcid humours in the blood, ſharpens the appetite, ſtimulates the nerves, and invigorates the ſpirits, which in all ſtages of *chloroſis* are ſo apt be depreſſed. When the diſorder is not very obſtinate, nor far advanced, let the patient take from thirty to forty drops of the Lunar Tincture, in a wine-glaſs of cold ſpring-water, for thirty or forty days ſucceſſively, and it will perform a cure without the trouble of preparing the decoction. In this malady, I have lately had the happineſs of completing an elegant cure, which I ſhall mention here,

here, merely for the information of ſuch unfortunate maids as may be languiſhing under the ſame deplorable circumſtances. The following is a literal ſtatement of the

CASE.

A young lady, turned of ſeventeen, had been afflicted with *chloroſis* almoſt three years. In the early part of the malady, ſhe conceived an unconquerable appetite for wood-cinders, concreted mortar, tobacco-pipes, ſealing-wax, &c. Her courſes appeared at different intervals of the diſeaſe, but always irregular, and more or leſs in a vitiated ſtate. About half a year preceding my attendance, this flux had totally ceaſed; but upon the approach of every new moon, with which her menſes originally came, ſhe was afflicted with pains in the back and loins, heavineſs and turgidity about the region of the uterus, and other cuſtomary ſymptoms of the catamenia; yet not the ſmalleſt ſhow could be brought to appear. A little before this, the lady's affections had been placed on a young man in the neighbourhood; but whoſe ſituation in life was by no means on a ſcale adapted to the views of her father and family. The moment therefore this attachment was diſcovered, the lady was confined to her apartment, and neither ſuffered to take exerciſe or freſh air, without ſome truſty attendant to accompany her. This confinement heightened her diſeaſe, and brought on a ſettled melancholy, a green ſallow complexion, dejected ſpirits, univerſal laſſitude, and waſting of the fleſh. The morbid ſtate of her body having thus undermined her conſtitution, without attracting either her own or her father's care, the diſorder fell upon the vital organs, and with ſo rapid a progreſs, that within twenty-four hours ſhe was ſeized with an ardent fever, attended with loſs of appetite, delirium, and a total

privation of ſpeech. In this ſhocking ſtate ſhe had the alternate advice of three phyſicians, of the firſt reſpectability; but the diſorder increaſing, and putting on the moſt dangerous ſymptoms, after having baffled their utmoſt ſkill, a conſultation was had, and the miſerable patient was apparently conſigned to the grave.

Under theſe deplorable circumſtances it was my lot to be called; and, upon a cloſe examination of the patient, ſcarcely any viſible ſigns of life remained. The pulſe had nearly ſubſided. The action of the heart and lungs could ſcarcely be diſcerned. The eyes were ſunk, and fixed; yet retained an uncommon look of expreſſion and ſentiment. At this time ſhe had a large bliſter round her neck; another on the pit of her ſtomach; a third, very large, between her ſhoulders; a fourth, on her head; and a fifth and ſixth, inſide the ancles and legs. Veneſection had been ſo often repeated, that ſcarcely blood enough remained to ſupport the heat and action of the heart. In this exhauſted ſtate, I only adminiſtered three table-ſpoonfuls of the Solar Tincture, *undiluted*, at intervals of little more than an hour apart; and in the ſpace of four hours after, I had the heart-felt ſatisfaction of ſeeing the energy of the blood reſtored; pulſation gradually reſumed its action; the lungs were dilated; reſpiration became free; and a profuſe ſweat, which the Tincture induced, fortunately opened the perſpiratory veſſels; and the patient began to give evident ſigns of eaſe and ſenſibility. Warm nouriſhing food was afterwards taken in ſmall quantities; and I was enabled to remove the bliſters, and perform the dreſſings, without pain or torture to the languid patient. The Solar Tincture was now daily adminiſtered for ten days, in the quantity of a table-ſpoonful, in a wine-glaſs of warm barley-water, three times a day, and once in the night, whenever watchfulneſs came on. About the middle of the

ſeventh

ſeventh day, ſhe began to articulate; and on the tenth day, her voice and bodily functions were ſo far reſtored, that I deemed it ſafe to give her an interval of ſix days reſt, without any medicine whatever. I had the happineſs to find my expectations completely anſwered; for nature, aſſiſted by nouriſhing food, effected more than a profuſion of drugs; ſo that, in little more than twenty days, my patient was able to walk, and to put herſelf under a courſe of the Lunar Tincture. This ſhe perſiſted in, with nouriſhing diet, ſeconded by occaſional but very gentle airings in the carriage, for near a month longer; when, on the approach of the enſuing new moon, to the unſpeakable joy of her friends, the menſtrual flux reſumed its natural courſe; the comfort and relief of which was ſo viſible to the patient, that ſhe in extacy exclaimed, "*my ſufferings are at* "*an end.*" This lady has ever ſince continued to improve in health and ſpirits in ſo ſurpriſing a degree, that looking back on her late miſerable and reduced ſtate of body, forms a contraſt ſo great as almoſt to exceed belief. Yet the lady and her worthy parent are at all times ready to authenticate the fact to any reputable enquirer, or to the friends of any unfortunate female labouring under a ſimilar affliction.

OF THE FLUOR ALBUS, OR WHITES.

THE fluor albus, female weakneſs, or whites, as it is commonly called, is a diſeaſe of the uterus and its contiguous parts; from which a pale-coloured, greeniſh, or yellow fluid is diſcharged, attended with the loſs of ſtrength, pain in the loins, bad digeſtion, and a wan ſickly aſpect. The quantity, colour, and conſiſtence, of the diſcharge, chiefly depend upon the time of its duration, the patient's habit of body, and the nature of the cauſe by which it was produced. Weakly women, of lax ſolids, who have had many children, and long laboured under

under ill health, are, of all, the moſt ſubject to this diſagreeable diſeaſe; from which they unfortunately ſuffer more ſeverity than others, as the niceſt ſenſations are often connected with ſuch a delicacy of bodily frame as ſubjects them to it. In Holland it is very frequent, and in a manner peculiar to the place, from dampneſs of ſituation; the ſurrounding air being ſo overcharged with moiſture as to relax the body, prevent perſpiration, and throw it upon the bowels or uterus; producing in the firſt a diarrhœa or flux, in the laſt the fluor albus or female weakneſs. The diſcharge often proceeds from the veſſels ſubſervient to menſtruation; becauſe, in delicate habits, where thoſe veſſels are weak, and conſequently remain too long uncontracted, the fluor albus ſometimes immediately follows the menſes, and goes off by degrees as they gradually cloſe. It alſo comes from the mucous glans of the uterus, as is particularly evident in very young females, of eight or ten years old; in theſe, though very rarely, it has been obſerved; it muſt then neceſſarily have eſcaped from thoſe parts, as the uterine veſſels are not ſufficiently enlarged for its paſſage at ſo early a period.

Sometimes, as in women with child, it proceeds from the paſſage to the uterus, and not from the uterus itſelf; which during pregnancy is cloſely ſealed up, ſo that nothing can paſs thence till the time of labour. The application of thoſe inſtruments called peſſaries, from the pain and irritation they occaſion, are alſo apt to bring on this diſcharge. The fluor albus has been ſuppoſed to ſupply the want of the menſes; becauſe where the firſt prevails, the laſt are generally either irregular or totally wanting: but it might more properly be ſaid that the preſence of the fluor albus, which is a preternatural evacuation, occaſions the abſence of that which is natural; as is evident from the return of the menſes after the fluor albus has been cured.

Indeed

Indeed, when this diſcharge appears about the age of thirteen or fourteen, and returns once a month, with ſymptoms like thoſe of the menſes, then it may be deemed ſtrictly natural, and ought not to be ſtopped. The diſtinctions of the fluor albus may be divided into two claſſes: the firſt ariſing from a ſimple weakneſs of the ſeminal veſſels; the ſecond from a relaxation of the ſolids, which may either be general, where the whole bodily ſyſtem is enervated and unſtrung; or partial, where the womb only is affected, in conſequence of hard labour, frequent miſcarriages, a ſuppreſſion or immoderate quantity of the menſes, or a ſtrain of the back and loins. In the firſt caſe, the diſcharge being generally mild, may be eaſily taken away. In the ſecond, it may proceed from a vitiated or impure blood, where the body, from this cauſe, is loaded with groſs humours, which nature, for her own ſecurity and relief, thus endeavours to carry off. In ſuch caſes, the diſcharge is often of a reddiſh colour, like that from old malignant ulcers, being ſometimes ſo ſharp as to excoriate the contiguous parts, and occaſion a ſmarting and heat of urine. A deep-ſeated darting pain, with a depreſſion, attending ſuch a diſcharge, is a very dangerous and alarming ſign, and indicates an ulcerated or cancerous womb. This malignant ſtate of the diſeaſe, if of long continuance, is extremely difficult of cure; and diſpoſes the patient to barrenneſs, a bearing down, dropſy, or conſumption. In ſhort, as this is a malady of the moſt dangerous kind, which by long continuance or neglect becomes difficult of cure, and often proves fatal, it were to be wiſhed that women, on ſuch occaſions, would be more attentive to their own ſafety, by uſing all poſſible means in due time to prevent the diſorder.

As women are ſometimes connected with thoſe who do not conſcientiouſly regard their ſafety, it is a cir-

a circumſtance of the utmoſt conſequence to diſtinguiſh a freſh venereal infection from the fluor albus, or whites: for, if the firſt be miſtaken for the laſt, and be either neglected or improperly treated, the worſt conſequences may ariſe. In addition therefore to what I have ſtated in page 219 of my Family Phyſician, the following ſigns will ſerve to inform the patient whether there be occaſion for her doubts or not. A freſh infection, called gonorrhœa, is malignant and inflammatory; the fluor albus moſt commonly ariſes from relaxation and bodily weakneſs, and therefore the remedies proper in this laſt diſorder would render the firſt more violent, by locking up and confining the infectious matter. In the gonorrhœa, the diſcharge chiefly proceeds from the parts contiguous to the urinary paſſage, and continues whilſt the menſes flow; but in the fluor albus, it is ſupplied from the cavity of the womb and its paſſage, and then the menſes are ſeldom regular. In the gonorrhœa, an itching inflammation and heat of urine are the forerunners of the diſcharge; the orifice of the urinary paſſage is prominent, and the patient is affected with a frequent irritation to make water. In the fluor albus, pains in the loins, and loſs of ſtrength, attend the diſcharge; and if any inflammation or heat of urine follow, they happen in a leſs degree, and only after a long continuance of the diſcharge, which becoming ſharp and acrimonious, excoriates the ſurrounding parts. In the gonorrhœa, the diſcharge ſuddenly appears, without any evident cauſe; but in the fluor albus, it comes on more ſlowly, and is often produced by irregularities of the menſes, frequent abortion, ſtrains, or long-continued illneſs. In the gonorrhœa, the diſcharge is greeniſh or yellow, leſs in quantity, and not attended with the ſame ſymptoms of weakneſs. In the fluor albus, it is alſo often of the ſame colour, eſpecially in bad habits of body,

and

and after long continuance; but is uſually more offenſive, and redundant in quantity. The whites often afflicts maids of a weakly conſtitution, as well as married women and widows; and indeed there are few of the ſex, eſpecially ſuch as are ſickly, who have not known it, more or leſs. For whatever diſeaſe renders the blood poor, foul, or viſcous, and reduces a woman to a languid condition, is commonly ſucceeded by the whites, which when they come in this manner, continue more abundantly to weaken the body, and are in great danger, without ſpeedy remedy, of wearing away the patient, and making her a miſerable victim to mortality. Let no woman, therefore, when ſhe finds herſelf afflicted by this noxious complaint, neglect endeavouring to obtain an immediate remedy. The regimen and general management are pointed out in the medical part of my Family Phyſician, page 220; but, in lieu of all other medicines, make a decoction of tormentil-root, biſtort, comfrey, and red roſe-leaves, and take a gill-glaſs three parts full, adding to it thirty or forty drops of the Lunar Tincture, which muſt be perſiſted in, morning, noon, and night, for ten days; repeat the decoction, morning and evening only, for ten days more; after which let it be diſcontinued, and take the Tincture every morning, for a month, twenty drops in a wine-glaſs of cold ſpring-water; the diſeaſe will be found gradually to abate: and, upon any ſymptoms of a return of it, take from fifteen to twenty drops of the Tincture, in a wine-glaſs of cold water, every morning, for a week, and it will go entirely off; as hath been verified in a great number of patients, who are ready to teſtify that they owe their cure, even in the moſt obſtinate caſes, entirely to the Lunar Tincture.

OF BARRENNESS, OR INFERTILITY.

BARRENNESS is ſuch a ſtate of a woman's body as indiſpoſes it, upon the uſe of the natural means,

to conceive and propagate her ſpecies. This proceeds from many ſources, which may be reduced to theſe two general heads: Firſt, an indiſpoſition of the parts to receive the male ſemen in the act of copulation, or that vital effluvium ſtreaming from it, which alone can impregnate the ovaria. Secondly, an inaptitude in the blood to retain and nouriſh the vital principle after it is communicated, ſo as to make it grow and expand its parts, till it become a proper fœtus. Conception is alſo hindered by a hectic, hydropic, or feveriſh, ſickly habit; by a deficiency or obſtruction of the monthly courſes, which impoveriſhes the fluids; by the whites, which, continuing too long, relaxes the glans of the uterus, and drown, as it were, the prolific particles; and too often by a *vice*, which utterly deſtroys the tone and vigour of the parts; as is fully exemplified in my Family Phyſician, page 221. Preparatory to the cure of infertility, it is proper to uſe evacuations, unleſs any particular ſymptom ſhews them to be dangerous. Bleeding, lenient purgatives, ſuch as the ſolutive electuary, and a gentle vomit of ipecacuanha, eſpecially if the perſon be plethoric or cacochymic, cannot but be of great ſervice; proceed then with the following ſtrengthening electary; take roots of ſatyrion, and eringo candied, of each one ounce; powders of cinnamon, ſweet-fennel-ſeeds, and preſerved ginger, of each half an ounce; mace, roots of contrayerva, and Spaniſh angelica, of each one drachm; troches of vipers one ounce; juice of kermes, ſix drachms; tincture of cantharides, half a drachm; ſyrup of cloves, a ſufficient quantity to make an electary. Let the quantity of a large nutmeg be taken every morning early, every afternoon at about five o'clock, and at night going to bed; and, immediately after taking the electary, drink a wine-glaſs full of the following infuſion, adding to it from twenty to thirty drops of the Lunar Tincture, viz. Take cinnamon powdered one ounce;

ſweet-

ſweet-fennel-ſeeds bruiſed, and lavender-flowers, of each half an ounce; Spaniſh angelica-root, ginger, contrayerva, mace, and cochineal, of each one drachm and a half; Canary wine, two quarts: infuſe, according to art, for two or three days, and ſtrain off the infuſion for uſe. Continue the electary for ten days ſucceſſively; then omit a week, and continue it for ten days more; after which continue the infuſion and Tincture only, three times a day, for ten days more; then take it only twice a day for a month, or as long as the caſe requires, adding from fifteen to thirty drops of the Tincture to each glaſs, as the age or conſtitution of the patient may require. This courſe will be found moſt excellent for barrenneſs and debility; particularly whilſt ably aſſiſted by the Solar Tincture; which will greatly warm and rectify the blood and juices, increaſe the animal ſpirits, invigorate and revive the whole human machine, and not only raiſe the appetite to venereal embraces, but remove the uſual impediments to fertility; prepare the womb for performing its office, and the ovaria for impregnation. The Tincture warms, comforts, and excites the generative parts to admiration, and ſeldom fails of curing all common occaſions in barrenneſs, in a month or ſix weeks, if duly followed; as a proof of which, I beg leave to add the pleaſing circumſtances of the following ſingular

CASE.

A young lady of rank and fortune, but of a delicate frame, entered into the marriage ſtate about four years ago. Inſtead of deriving from it that bliſsful gratification which gives the honoured name of mother, ſhe became weak, languid, pale, and melancholy. The whole nervous ſyſtem was relaxed, the natural functions of the body were ſuſpended, œdematous tumours obſtructed the ſan-

guiferous paſſages, whence incurable barrenneſs, and lingering conſumption, ſeemed to be the ſad proſpects in view. In this melancholy ſtate of body and mind, by advice of her phyſician, when all hopes were apparently at an end, ſhe was put under a regular courſe of the Solar Tincture, which, to the aſtoniſhment of all, gradually deturged the obſtructed veſſels, propelled the animal juices through the ſyſtem, ſtrengthened and braced the nerves, induced a regular habit, reſtored the ſparkling eye and blooming cheek, and gave new vigour to the animal functions; the reſult of which has been, that before the end of the enſuing year, after her health was thus recovered, the lady became the happy mother of a SON and HEIR, to the inexpreſſible joy of an affectionate huſband, and a ſympathiſing family! For the ſake of females labouring under a ſimilar diſeaſe, reference to the above pleaſing fact is permitted to be had by all reſpectable enquirers, at the Author's houſe, No. 40, New Bridge-ſtreet, near St. Paul's.

INDISPOSITIONS ATTENDANT ON PREGNANCY.

THOUGH pregnancy be not a diſeaſe, but rather a natural alteration of the animal economy, which every female form muſt undergo, yet it is attended with a variety of complaints that require great attention; but for their cure or alleviation, medical aid has hitherto proved very deficient. In theſe complaints, however, the Lunar Tincture exerts moſt extraordinary properties, and excels whatever has been offered under a medical form. It is an univerſal purifier of thoſe heterogeneous particles which produce nauſea, and ariſe from the combining efforts of the maſculine and feminine tinctures; whence, according to the groſſneſs of the procreative fluids at the time of conception, proceed vomiting, pains in the head and ſtomach, fainting, &c. occaſioned by the jarring elements, ariſing from the

diſproportion

disproportion in the heat and active principle of the constituent parts of the male and female seed; this is not only attended with great debility and depression to the mother, in her whole nervous system, but often with hereditary diseases, and dreadful consequences, to the infant offspring. Indeed, so great has been the conflict of the male and female procreative tinctures for the mastery or predominant power, while passing through the circulating mass or habit of the mother, that the most curious and astonishing phenomena have, on many occasions, been observed to result from it. In a small village, in Somersetshire, in the year 1759, a girl was born with the hair on her head of two remarkably distinct colours; the right side, from an exact parallel line which divided the skull into two equal parts, was almost black; but the left side, from the same line, was of a reddish yellow. As she grew up, the dark hair became of a jet black, exactly like that of her father; whilst the other became of a strong carrotty red, precisely resembling that of her mother; and after the age of puberty, the hair on the privities, and under the armpits, as well as on her arms and legs, was diversified in the same manner; that on the right side, all the way down, from head to foot, being black, whilst that on the left side was entirely red. The young woman lived to the twenty-eighth year of her age, and was resorted to as a great curiosity.

Another well-known yet remarkable instance of this conflict of the male and female procreative tinctures at the time of impregnation, was the case of a man who, a few years since, kept a public-house in Tooley-street, Southwark. His father was a white man, belonging to one of the West-India packets; and his mother was a negro-girl, whom he had taken a fancy to, and purchased, on the arrival of one of the Guinea slave-ships at the island of Jamaica. He brought her with him to

London,

London, and, in the courſe of the enſuing year ſhe was delivered of a ſon, the whole right ſide of which was white, like the father; but the whole of the left ſide was black, like the mother. As he grew up, this viſible diſtinction became more ſtrongly marked; and during the time he kept the above public-houſe, in Tooley-ſtreet, he was reſorted to by an immenſe concourſe of people, who flocked there to ſpend their mite, in order to be ſatisfied that ſo great a curioſity really exiſted. The whole of his body appeared to be interſected by an exact parallel line, by which the efforts of conception ſeem to have united the male and female tinctures in preciſe equilibrio, without ſuffering them to intermix in coagula, or in impregnating and expelling the ovum from the ovaria, to its ſuſpended ſtate in the uterus. Hence the hair on the right ſide was long and brown, like that of the father; and half the face, neck, body, and privities, with the arm, thigh, leg, and foot, on the right ſide, were white; while the correſponding parts on the left ſide were black, like that of the mother, with half the hair on the privities and head black and woolly, exactly like that of a true negro.

A ſtill more curious and ſtriking example of this aſtoniſhing effort in the male and female procreative fluids, is verified in the caſe of Mr. John Clark, of Preſcot-ſtreet, Goodman's-fields. His father was a native of Africa, who, by dint of good fortune, had amaſſed a conſiderable ſum of money, and ſettled in London. He married a remarkably healthy young woman, a native of Devonſhire, who had been ſome time his ſervant. By her he had two ſons and three daughters, who were mulattoes, except the eldeſt ſon, who was the firſt-born, and the perſon above alluded to. From the head to the navel, all round his body, he was remarkably fair, had a fine ſkin, handſome round features, light brown hair, and ſanguine complexion,

plexion, like his mother; but from his navel downwards he was completely black, with ſhort black woolly hair on the privities, exactly like the father. At the age of thirty he married a young lady of good family and fortune, but of a delicate diſpoſition. For near three months he had the addreſs to conceal this deformity of colour from the knowledge of his wife, by wearing fleſh coloured ſilk drawers and ſtockings, which he pretended were lined with flannel to keep off the rheumatiſm, with which he had been ſorely afflicted, even to a degree that endangered his life, every time he attempted to leave them off. It happened, however, from ſome neglect of concealment before going to ſleep, that the curioſity of his wife was ſtrongly excited; and the opportunity proving favourable in other reſpects, it being quite day-light in the morning, and her huſband faſt aſleep, ſhe eagerly proceeded to ſatisfy her doubts. Gently turning down the bed-clothes, and removing the other impediments in the way of a complete inſpection, ſhe no ſooner diſcovered the real ſtate of things, than ſhe ſhrieked out vehemently, and fainted away! The huſband thus ſuddenly awakened, beheld his wife in a fit, and ſaw, with ſorrow and regret, the conſequences of a diſcovery which entirely reſulted from his own neglect. He immediately aroſe, called up the ſervants, and procured medical aſſiſtance with all convenient ſpeed; but in vain---the ſudden ſurpriſe, added to the mortification and terror, had ſo powerful an effect that the lady died in convulſions, nearly two months gone with child. I have often lamented that fortune did not throw me in the way at this critical juncture, for two reaſons: in the firſt place, I have the vanity to think I could have ſaved the patient's life; but, had I failed in that, I would have perſuaded Mr. Clark, from motives of philoſophical ſpeculation, and the improvement of

medical

medical ſcience, to have ſuffered me to open the womb of this unfortunate lady, in order to extract the fœtus; which, under the circumſtances of the uncommon conformation of the father, might have enabled me to throw a light on this very curious ſubject of occult enquiry, perhaps ſo as to have accounted more obviouſly for the jarring conflicts and ſtruggling efforts of the maſculine and feminine tinctures; to which alone we are to look for the formation of hermaphrodites, the production of monſters, &c*.

Sympathy and antipathy moſt certainly operate very powerfully on females in the early ſtate of pregnancy, and might, as was then ſuggeſted, have had a principal ſhare in carrying off the above unhappy lady, while no means were uſed to counteract their influence on the maſs of blood. Sudden

* We find many similar accounts, in different authors, of party-coloured people. Thus we are told, by Buffon and others, that copulation with a black man and a white woman has often produced a pied or spotted race, living instances of which are to be found in both the Indies. A very remarkable case is that of Maria Herig, who was spotted all over the body, and covered with hair, like the leopard. She was born at Dackstull, in Lorraine, in 1770, and was exhibited in Paris, in 1774. Both the skin and the hair were of a tan-colour; and besides these hairy spots, her stomach and belly were covered with longish hair, of a brown colour on one side, and lighter on the other. Somewhat similar, and not less remarkable, was the porcupine-man, who was born in Suffolk, in 1710, and was exhibited in every principal town in England. The skin of his body was covered with excrescences like thorns or prickles; and about the thickness of packthread. His face, the palms of his hands, and the soles of his feet, were the only parts that were free from them. They were of a reddish brown, and had such a degree of hardness and elasticity, as to rattle when the hand was moved over the body. They were half an inch long in some parts, and shorter in others. They did not appear till two months after his birth; but, what is most extraordinary, they dropped off every winter, and were renewed in the spring. He had six children, all of whom, like their father, were covered with these excrescences.

fright,

frights, longing, and loathing, and all marks on the fœtus, are obviouſly derived from this cauſe, and can only be corrected by giving energy and ſtimulus to the circulating ſyſtem, whereby the functions both of mind and body are ſtrengthened, and the nervous fluid fortified and protected againſt the ſudden impreſſion of external objects. It ſeems to be admitted by many eminent practitioners, that the diſeaſes incident to a pregnant ſtate in the early months ariſe from ſympathy; whilſt thoſe peculiar to the more advanced ſtages of geſtation, are produced by the ſtretching and preſſure of the uterus on the contiguous viſcera. Thus heart-burn and diarrhœa, tenſion and pains of the breaſt, nauſea and head-ache, deſire of unnatural food, tremours and dejected ſpirits, fainting and hyſteric fits, premature menſtruation, and conſequent abortion, proceed from the firſt of theſe cauſes; while coſtiveneſs, ſtrangury, cramp, and cholic, appear to reſult from the other. And though the celebrated Dr. Stahl, Dr. Cullen, and others, have ſo much differed as to the theory of theſe diſeaſes, yet they all agree that gentle opiates, aromatic infuſions, ſtrengthening bitters, and medicines calculated to give energy to the languid ſtate of the circulation, and to purify the groſs and viſcid elements which oppreſs the ſtomach and viſcera, are the only proper remedies to be adminiſtered. Now the Lunar Tincture poſſeſſes the aromatic and aſtringent virtues in an admirable degree; and is elegantly adapted to invigorate and aſſiſt the active faculties of nature, in expelling all viſcid humours from the ſtomach and bowels; and being compounded of the moſt ſubtile and occult elements, which preſerve the vital principle, it hence produces the moſt ſalutary effects on all women in a ſtate of pregnancy, by ſtimulating the procreative faculty to the formation of the fineſt children; correcting and purifying the procreative fluid from

infection or diſeaſe; preventing moles or falſe conceptions, removing all loathings, longings, or vomiting, and effectually preventing abortion, ariſing from whatever cauſe. For theſe reaſons, whenever a woman enters into a ſtate of matrimony, ſhe would do well to take twenty drops of the Lunar Tincture, every other morning, to promote conception; ſhe ſhould then continue it three times a week, from conception to the end of the fourth month; then it may be omitted, till a fortnight before her time, when ſhe ſhould take twenty drops in a wine-glaſs of cold ſpring-water, every morning till her labour; at which time it will wonderfully ſtrengthen her, and aſſiſt nature to facilitate the birth, promote the lochia, and carry off the after-pains. She might take it occaſionally during the month, in any ſymptoms of cold, fever, or hyſterics, diluted in a wine-glaſs of warm barley-water, about the middle of the day.

Women who are ſubject to miſcarriages, ſhould never fail to take this medicine, from the time they have reaſon to believe they are pregnant, until a full month after they have quickened. It may be taken once, twice, or thrice a day, or every other day, as the urgency of the caſe may require, from twenty to thirty drops, in a glaſs of forge-water, or in ſoft ſpring-water, in which common oak-bark has been ſteeped, and ſhe will effectually get over all cauſes of abortion. Women, after ſudden miſcarriages, or bad labours, will find wonderful relief by taking twenty drops of it in a wine-glaſs of warm barley-water, for a week or ten days. Nurſes, alſo, whoſe milk is griping or defective, ſhould take it once or twice a day, or as often as occaſion may require. The intention will quickly be experienced: the milk will be purified and augmented, and all the fluid ſecretions promoted, in a manner productive of ſound health, both to the mother and child. In caſes where œdematous

ſwelling

ſwelling of the legs and labia are occaſioned by the interruption of the refluent blood from the preſſure of the diſtended uterus on the vena cava, in violent floodings, in nervous ſpaſms, in epileptic fits, and in obſtinate convulſions, where the *vis vitæ* muſt be ſupported by repleniſhing the veſſels with the utmoſt ſpeed, recourſe ſhould be had to the Solar Tincture, which, in the moſt dangerous caſes, has been found to give immediate relief; and, if duly perſiſted in, will ſcarcely ever fail to effect a cure.

STATE OF WOMEN AT THE TURN OF LIFE.

THE moſt critical and dangerous time of a woman's life is that wherein the menſes ceaſe to flow, which uſually happens between forty and fifty years of age. The great change which this produces, by ſo copious a train being turned into the habit without previous preparation, is the ſole cauſe of its danger. Every woman muſt be more or leſs ſenſible when this period arrives, and ſhould conduct herſelf accordingly; for when the menſes are about to go off, they appear for the moſt part irregularly, both in time and quantity, once in a fortnight, three, five, or ſix weeks; ſometimes very ſparingly, and at other times in immoderate quantities. For want only of neceſſary care and attention, during the time that the menſes thus give ſymptoms of their departure, many and various are the complaints that enſue; among which are cold chills, ſucceeded by violent flushings of the face, and heat of the extremities; reſtleſs nights, troubleſome dreams, and unequal ſpirits; inflammation of the bowels; ſpaſmodic affections; ſtiffneſs in the limbs, ſwelled ankles, ſore legs with pains and inflammation; the piles, and other ſymptoms of plenitude. But all this might eaſily be prevented, by attending to a due regimen, and taking theſe Tinctures, as occaſion may require.

Whenever a woman has reaſon to ſuſpect her menſes are about to leave her, let her loſe four, five, or ſix ounces of blood, as her habit of body will admit; then let her make a decoction, by taking gentian-roots, one pound; ſenna, and orange-peels, of each half a pound; pour upon them a gallon of hot water, and after it has ſtood twenty-four hours, pour off the liquor for uſe. Let her take from twenty to forty drops of the Lunar Tincture, in a gill-glaſs-full of the above decoction, every night and morning for ten days; then let her continue it every morning for ten days more, and afterwards once every two or three days, or oftener, if the terms are of an ill colour and ſcent, until they are corrected. This courſe muſt be followed every ſpring and fall, for a month or ſix weeks ſucceſſively, by all women who find their menſes come irregularly, or too ſparingly, until they entirely ceaſe; after which, let the patient put herſelf under a courſe of the Solar Tincture, for a month or ſix weeks, taking one ſpoonful in a wine-glaſs of warm water, every night and morning for a week; then let it be taken only once a day, in cold water, for the reſidue of the time; and if ſhe take, occaſionally, two table-ſpoonfuls of the Solar Tincture, diluted in a tumbler of warm water, as a beverage after dinner or ſupper, inſtead of wine or brandy-and-water, it will be productive of great benefit in eſtabliſhing a healthful ſtate of her blood, and carrying off the viſcid humours generally produced by the menſtrual flux returning into the habit.

Should it at this time happen, which it often does, that the terms flow too abundantly, and produce a flooding, the patient muſt immediately loſe ſix or eight ounces of blood, and be kept as much as poſſible at reſt, with her head low, until the medicine has had time to take effect; let her diet be ſpare, but not too lax; and let her apply to the following

following courſe: Take conſerve of red-roſes, marmalade of quinces, juice of kermes, candied nutmegs, ſyrup of quinces, and ſyrup of coral, of each half an ounce; aromaticum roſalum, and aſtringent ſaffron of iron, of each two drachms; oil of cinnamon, ſix drops; mix into an electary (which may be made up by any apothecary, if the receipt be ſent him) and take the quantity of a large nutmeg, every day at noon, for ſix, eight, or ten days, or longer, as the urgency of the caſe may require, drinking immediately after it twenty drops of the Lunar Tincture, in a wine-glaſs of warm water; the flooding, by this means, will gradually abate, the feveriſh ſymptoms will go off, the back will be ſtrengthened, the womb-veſſels cleanſed, and the patient wonderfully reſtored. After the tenth day, in moſt caſes, the electary might be diſcontinued, and the Lunar Tincture ſhould then be taken every morning for a month, from twenty-five to fifty drops, according to the conſtitution of the patient; by which time the parts will be braced, comforted, and coiled up, ſo as to fear no danger of a relapſe. About a month after, let her undergo a courſe of the Solar Tincture, for the purpoſe of rectifying and ſtimulating the maſs of blood. This ſhould be taken for a month; a table-ſpoonful, night and morning, in a wine-glaſs of cold ſpring-water, for the firſt ten days; and then once a day only, for the reſidue of the time; the good effects of which will be ſenſibly and quickly felt.

The intention of nature in returning this flux back into the habit, is to nouriſh and preſerve life, not to deſtroy it. Until the age of puberty, girls require this blood for the ſuſtenance and nouriſhment of their bodies; when that is ſufficiently eſtabliſhed, it is applied to the purpoſes of nouriſhing the fœtus, and of ſuckling the infant after it is born. When child-bearing ceaſes, and the

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eve of life comes on, the flux is returned back, to comfort and preſerve it; therefore, if women were but careful to obſerve a regular courſe before this flux returns upon them, by adopting the methods I have preſcribed, and by taking the medicine ſpring and fall, for two or three years previouſly to the time, they might not only eſcape the perils and dangers attendant on this period, but would lay the foundation of a ſettled ſtate of health, and enjoy a ſound conſtitution of body to extreme old age.

OF MASCULINE OR SOLAR DISEASES.

Solar diſeaſes are all ſuch as proceed from a hot and dry cauſe, or have their origin in the blood and lymph. For as the beams flowing from the ſun are the fountain of life and heat to the great world, or univerſal ſyſtem of nature, ſo the blood, flowing from the heart, is the fountain of life and heat to the little world, or univerſal ſyſtem of the *microcoſm*, or body of man. And again, as the ſtream of rays from the ſun regulates the ſeaſons, and produces the variety of climates, ſo the ſtream of blood in man's body, as affected by the ſun, regulates and diverſifies the form and figure of the whole race of human beings. As ſeaſons and climates are ſubject to the external elements, which are ſtill governed by the ſuperior influence of the ſun, ſo are they rendered either mild, healthful, and productive; or turbulent, peſtilential, and barren. Juſt ſo the whole circulating maſs is affected, by change of climates and ſeaſons, and by all the variations and agitations of the external elements; and hence diſeaſes are induced in the blood, and are either mild, ardent, or acute, proportionably as the ſanguiferous fluid becomes diſtempered and impaired by the action of the ambient or contiguous atmoſphere. Thus we perceive the ſolar influence on the human frame,

and

and diſcover that the origin of the diſeaſe is in the blood; for no longer than is this vital ſtream kept in due circulation, pure, and uncontaminated, can animal life be ſuſtained, or the body preſerved in health and vigour.

From the expreſs words of ſcripture, Levit. xvii. 11, 14; Deut. xii. 23, we are warranted to infer, that *in the BLOOD is the LIFE;* and there is not a doubt but the living principle of the blood conſtitutes the life of the body.

Of this opinion was the celebrated Harvey, as well as many of the ancient philoſophers and phyſicians; and the late Mr. John Hunter declared himſelf to be of the ſame way of thinking. We find the blood unites living parts, in ſome circumſtances, as certainly as the yet recent juices of the branch of one tree unite it with that of another. Were either of theſe fluids to be conſidered as extraneous or dead matter, they would act as ſtimuli, and no union would take place in the animal or vegetable kingdom. This argument Mr. Hunter eſtabliſhed by the following experiment: Having taken off the teſticle from a living cock, he introduced it into the belly of a living hen. Many weeks afterwards, upon injecting the liver of the hen, he injected the teſticle of the cock likewiſe, which had come in contact with the liver, and adhered to it. In the nature of things, there is not a more intimate connection between life and a ſolid, than between life and fluid. For although we are more accuſtomed to connect it with the one than the other, yet the only real difference that can be ſhewn between a ſolid and a fluid is, that the particles of the one are leſs moveable among themſelves than thoſe of the other. Beſides, we often ſee the ſame body fluid in one caſe, and ſolid in another. The blood will alſo become vaſcular, like other living parts. Mr. Hunter affirms, that, after amputations, the coagula in the extremities of arte-

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ries form veſſels, as may be ſeen by injecting theſe arteries; and he had a preparation by which he could demonſtrate veſſels riſing from the centre of what had been only a coagulum of blood, and opening into a ſtream of circulation. If blood be taken from the arm, in the moſt intenſe cold which the human body can bear, it raiſes the thermometer to the ſame height as if taken in the moſt fultry heat. This is a ſtrong proof of the blood being alive; for living bodies alone have the power of reſiſting great degrees both of heat and cold, and of maintaining, in almoſt every ſituation, while in health, that temperature which we diſtinguiſh by the name of animal heat. Blood is likewiſe capable of being acted upon by a ſtimulus; for it coagulates from expoſure, as certainly as the cavities of the abdomen and thorax inflame from the ſame cauſe. The more it is alive, that is, the more the animal is in health, it coagulates the ſooner on expoſure; and the more it has loſt of its living principle, as in caſe of violent inflammations, the leſs it is ſenſible to the ſtimulus produced from its being expoſed, and it coagulates the later.

We may likewiſe obſerve, that the blood preſerves life in different parts of the body. When the *nerves* going to any part are tied or cut, that part becomes paralytic, and loſes all power of motion; but it does not mortify. If the *artery* be cut, the part dies, and mortification enſues. What keeps it alive in the firſt caſe? nothing but the living principle, which alone can keep it alive; and this phenomenon is inexplicable on any other ſuppoſition, than that the life is contained in the blood. Another argument is drawn by Mr. Hunter, from a caſe of a fractured os humeri. A man was brought into St. George's Hoſpital, for a ſimple fracture of the os humeri, or arm, and died about a month after the accident. As the bones had not united, Mr. Hunter injected the arm after death. He found

that

The Nerves of the Human Body

that the cavity between the extremities of the bones was filled up with blood which had coagulated. This blood was become vaſcular, or full of veſſels. In ſome places it was very much ſo. He does not maintain that all coagulated blood becomes vaſcular: the reaſon is obvious; for it is often thrown out and coagulated in parts where its becoming vaſcular could anſwer no end in the ſyſtem, as, for example, in the cavities of aneuriſmal ſacs. If it be ſuppoſed that in ſuch caſes as the one now mentioned, the veſſels are not formed in the coagulum, but come from the neighbouring arteries, it is equally an argument that the blood is alive: for the ſubſtance into which veſſels ſhoot muſt be ſo. The very idea that ſuch a quantity of dead matter, as the whole maſs of blood, circulates in a living body is abſolutely abſurd.

Thoſe who have ventured to oppoſe this doctrine, and the evidence of ſcripture with it, conſider the brain and nervous ſyſtem as the fountain of life; and that, ſo far from receiving its life from the blood, the nervous ſyſtem is capable of inſtantaneouſly changing the craſis of the blood, or any other animal fluid; and though the nervous ſyſtem cannot continue its action for any length of time, if the action of the blood-veſſels be ſuſpended, yet the heart and blood-veſſels cannot act for a ſingle moment without the influence of the nervous fluid. For this reaſon, ſay they, it is plain we muſt ſuppoſe the nervous ſyſtem, and not the blood, to contain properly the life of the animal, and conſequently to be the principal vital organ. The ſecretion of the vital fluid from the blood, by means of the brain, is, by the ſupporters of this argument, denied. They ſay, that any fluid ſecreted from the blood muſt be aqueous, inelaſtic, and inactive; whereas the nervous fluid is full of vigour, elaſtic, and volatile in the higheſt degree. The great neceſſity for the circulation of the blood

through all parts of the body, notwithſtanding the preſence of the nervous fluid in the ſame parts, they ſay, is becauſe ſome degree of tenſion is neceſſary to be given to the fibres, in order to fit them for the influx of the nervous fluid; and this tenſion they receive from the repletion of the blood-veſſels, which are every where diſperſed along with the nerves.

To follow this opinion through every argument, would prove tedious and unneceſſary, as the following ſhort obſervations will decide the matter abſolutely againſt the patronizers of the nervous ſyſtem. In the firſt place, then, if we can prove the life of the human body to have been communicated from a fluid to the nervous ſyſtem, the analogical argument will be very ſtrongly in favour of the ſuppoſition that the caſe is ſo ſtill. Now that the caſe once was ſo is moſt evident; for the human body, as well as the body of every other living creature, in its firſt ſtate, I have ſhewn to be a gelatinous maſs, without muſcles, nerves, or blood-veſſels. Nevertheleſs, this gelatinous matter, even at that time, contained the nervous fluid. Of this there can be no doubt, becauſe the nerves are formed out of it, and have their power originally from it; and, what is remarkable, the brain is obſerved to be that part of the animal which is firſt formed. Of this gelatinous or procreative fluid we can give no further account, than that it is the nutritious matter from which the whole body appears to be formed. At the original formation of man and other animals, therefore, the nutritious matter was made the ſubſtratum of the whole body, conſiſting of muſcles, nerves, blood-veſſels, &c. nay more, it was the immediate efficient cauſe of the nervous power itſelf *. Again, in the formation

* That in man there is a display of the vegetable as well as animal property, is clear and apparent from a view of his arteries

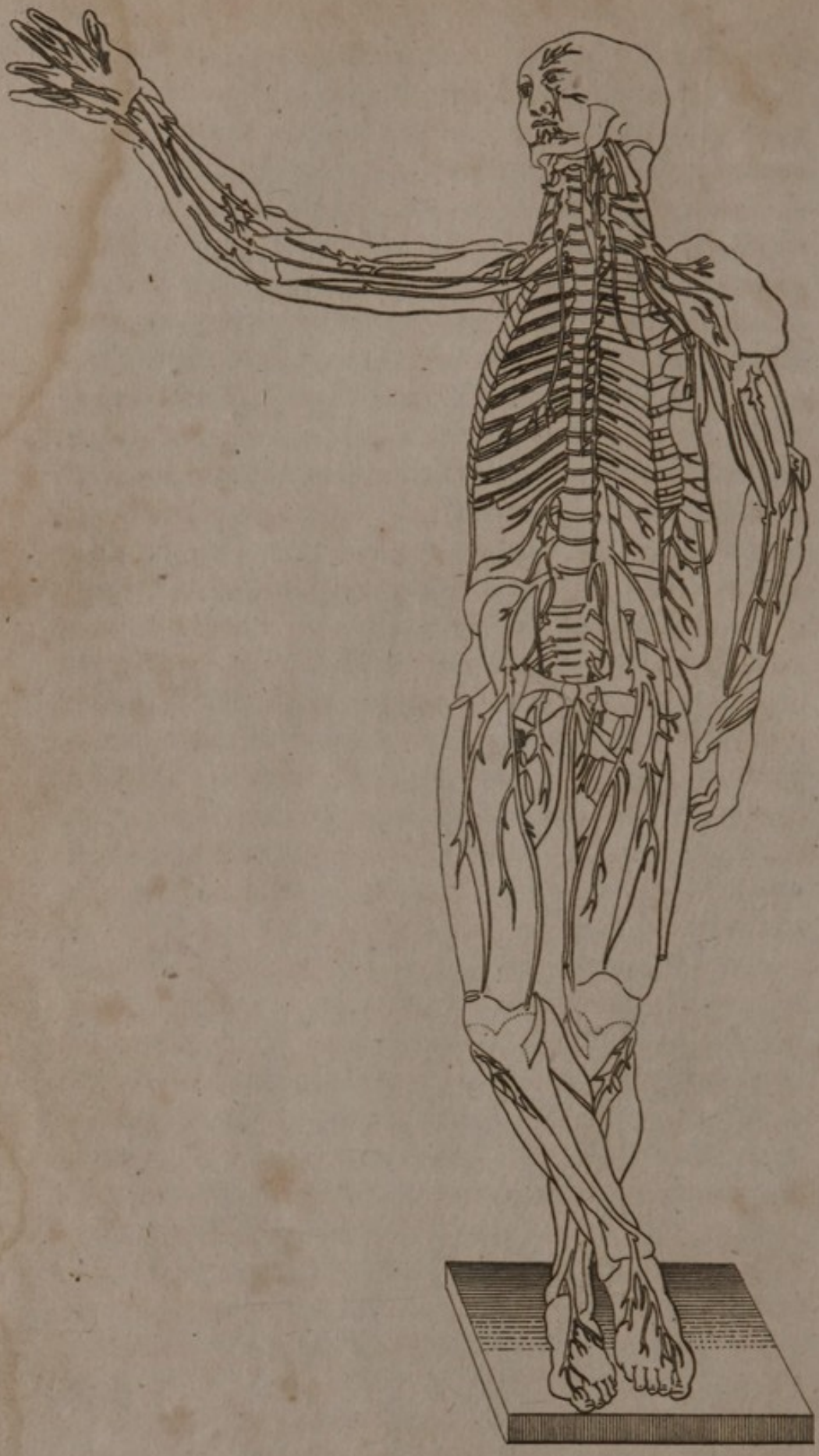
The Arteries of the Human Body

tion of the embryo, we ſee a vital principle exiſting, as it were, at large, and forming to itſelf a kind of regulator to its own motions, or a habitation in which it chooſes to reſide, rather than to act at random in the fluid. This habitation, or regulator, is undoubtedly the nervous ſyſtem; but at the ſame time, it is no leſs evident that a nutritious fluid is the immediate origin of theſe ſame nerves, and of that very nervous fluid. Now we know that the fluid which in the uterus nouriſhes the bodies of all animals in embryo, is neceſſarily equivalent to the blood which nouriſhes the bodies of thoſe which are adult; and conſequently, as ſoon as the blood became the only nutritious juice of the body, at the ſame time the nervous fluid took up its reſidence there, and from the blood diffuſed itſelf along the nerves, where it was regulated exactly according to the model originally formed in the embryo. Perhaps it may be ſaid, that the vital power, when once it hath taken poſſeſſion of the human or any other body, requires no addition or ſupply, but continues there in the ſame quantity from firſt to laſt. If we ſuppoſe the nervous power to be immaterial, this will indeed be the caſe, and there is an end to reaſoning upon the ſubject; but if we call this power a volatile and elaſtic fluid, it is plain that there will be more occaſion for recruits to ſuch a power than to any other fluid of the body, as its volatility and elaſticity will promote

arteries and nerves, for they represent vegetation (*vide the plates*); the only order below them is mineral, to which the bones, in man, are analogous, and contain in them solidity, extension, and gravity, as well as vegetation: but if we examine the animal creation in him, we shall not only find all the properties of matter, the vegetation of plants, and the life and instinct of animals, but the free use and exercise of reason, or the intellectual faculties; a survey of which made the prophet exclaim, "HE *has made us wiser than the* BEASTS *of the earth, and higher than the fowls of* HEAVEN."

its eſcape in great quantities through every pore of the body. It may perhaps be objected, that it is abſurd to ſuppoſe the blood capable of putting matter in ſuch a form as to direct its own motions in a particular way: but even of this we have a poſitive proof, in the caſe of the electric fluid. For if any quantity of this matter has a tendency to go from one place to another, where it meets with difficulty (through the air, for inſtance) it will throw ſmall conducting ſubſtances before it, in order to facilitate its progreſs. Alſo, if a number of ſmall and light conducting ſubſtances be laid between two metallic bodies, ſo as to form a circle, a ſhock of electricity, for example, will deſtroy that circle, and place the ſmall conducting ſubſtances nearer to a ſtraight line between the two metals, as if the fluid knew there was a ſhorter paſſage, and had reſolved to take that, if it ſhould have occaſion to return. Laſtly, it is univerſally allowed, that the brain is a ſecretory organ, made up of an infinite number of ſmall glans, which have no other excretories than the medulary fibres and nerves. As a conſiderable quantity of blood is carried to the brain, and the minute arteries end in theſe ſmall glans, it follows that the nervous fluid *muſt come from the blood*. Now, there is no glan whatever, in the human or any other body, but will diſcharge the fluid it is appointed to ſecrete, in very conſiderable quantity, if its excretory be cut. Upon the cutting of a nerve, therefore, the fluid ſecreted by the brain ought to be diſcharged; but no ſuch diſcharge is viſible. A ſmall quantity of glairy matter is indeed diſcharged from the large nerves; but this can be no other than the nutricious juice neceſſary for their ſupport. This makes it plain, even to demonſtration, that the fluid ſecreted in the brain *is inviſible* in its nature; and as we know the nervous fluid hath its reſidence in the brain, it is very probable, to uſe no ſtronger

expreſſion,



The Veins of the Human Body

expreſſion, that it is the peculiar province of the brain to ſecrete this fluid from the blood, and, conſequently, that the blood muſt originally contain the vital principle.

From the foregoing obſervations, we may ſafely conclude that the maſs of blood is the univerſal medium by which life is propagated, and health preſerved, in every claſs of beings; and that, in its impure or infected ſtate, it is the ſource whence the endleſs number of hereditary diſeaſes derive their origin. Whatever fault impairs the parent blood, fails not to taint the tender habit of its young; whence it has become an eſtabliſhed maxim, that as healthy parents naturally produce healthy children, ſo diſeaſed parents as naturally produce a diſeaſed offspring. Some of theſe diſeaſes appear in the earlieſt infancy; ſome occur equally at all ages; whilſt others lurk unſuſpected in the habit to extreme old age, or even to a new generation, ſlowly impairing the vital organs, and gradually undermining the conſtitution, before their ſource and fatal tendency can poſſibly be diſcovered. There are ſome diſeaſes, indeed, which, though born with us, cannot be ſaid to be derived from the parent; as when a fœtus receives ſome hurt by an injury done to the mother; while others, neither born with us, nor having any foundation in the conſtitution, are ſucked in with the nurſe's milk. Let it then be the care of every parent, who from ſome local misfortune is ſo far compelled to depart from the ties of nature as to abandon her tender offspring to the breaſt of another, to be ſatisfied, as far as human foreſight and medical penetration can reach, that the conſtitution and blood of the nurſe is free from ſcrofula and every other hereditary impurity.

Accidental diſeaſes, though not derived from the parents, nevertheleſs, in general, ſpring from the blood; which conſtituting or propagating animal

life

life through every part of the body, is neceſſarily expoſed to every external offending cauſe, from which impreſſion particular accidental diſeaſes enſue. The climate itſelf under which people live will often produce theſe affections in the blood; and every particular climate hath, more or leſs, a tendency to produce a particular diſeaſe, either from its exceſs of heat or cold, or from the mutability of the weather. An immenſe number of diſeaſes are alſo produced in the blood by impure air, or ſuch as is loaded with putrid, marſhy, and other noxious vapours. The ſame thing likewiſe happens from high-ſeaſoned or corrupted aliment, whether meat or drink; though even the beſt and moſt nutritious aliment will hurt, if taken in too great a quantity; not to mention poiſons, which are endowed with ſuch pernicious qualities, that, even when taken in the ſmalleſt quantity, they produce the moſt grievous ferment in the blood, ending perhaps with death itſelf. There are likewiſe other accidents and dangers to which mankind are expoſed, that ingraft innumerable diſeaſes in the maſs of blood; ſuch as the bite of venomous reptiles, or of a mad dog; an injudicious inoculation or miſtreatment of the ſmall-pox or meaſles; the pſora, or itch; the venereal infection; alſo broken limbs, wounds, and contuſions; which, though proceeding from an external cauſe at firſt, fail not to impair the blood, and often terminate in internal diſeaſes and premature death.

Man, however, is not left without defence againſt ſo many and ſuch great dangers. The human body is poſſeſſed of a moſt wonderful power, by which it preſerves itſelf from diſeaſes, keeps off many, and in a very ſhort time cures ſome already begun, while others are, by the ſame means, more ſlowly brought to a happy concluſion. This power, called *autocrateia*, or *vis medicatricis naturæ*, is well known both to phyſicians and philoſophers, by whom

whom it is moſt juſtly celebrated; for this alone is ſufficient for curing many diſeaſes, and is of ſervice in all. Nay, even the beſt medicines operate only by exciting, and properly directing, this expulſive force, by which the excrementitious humous from the aliments and blood are expelled through the proper channels of evacuation, as well as through the excretory ducts, chiefly by means of the *inſenſible perſpiration*; by the power of which, the offending humours of the blood and juices are perpetually flying off. But though phyſicians juſtly put confidence in this power, and though it generally cures diſeaſes of a ſlighter kind, yet it is not to be thought that thoſe of a more grievous tendency are to be left to the unaſſiſted efforts of the footſteps of nature. Phyſicians have therefore a twofold error to avoid, namely, either diſpoſing the ability of the *vis medicatricis* too much, which if left alone would work a radical and perfect cure; or, putting too great confidence in theſe exertions of nature, they are left unſeconded and alone, till the virulence of infection or diſeaſe undermines the conſtitution, and bears down all before it.

The grand and perpetual means by which the foul and offending humours in the blood and juices are continually carried off, is undoubtedly through the perſpirative pores and veſſels, which it is highly compatible with ſound health to keep open, and for which purpoſe medicaments are principally uſed. When this evacuation is copious and groſs enough to be diſcerned by the eye, as in ſweat, the perſpiration is ſaid to be ſenſible; but where it is ſo volatile as to eſcape the notice of the ſenſes, as is the caſe in the ordinary ſtate of the body, it is called *inſenſible perſpiration*. The veſſels through which the perſpiration is performed lie obliquely open, under the ſquammæ, or ſcales of the cuticle or ſcarf-ſkin. They are inconceivably ſmall; from a calculation of Lewenhoek, it appears that the mouths

mouths of one hundered and twenty-five thouſand of them may be covered with a common grain of ſand. The moſt conſiderable of theſe pores are the orifices of the ducts ariſing from the milliary glans. Through theſe veſſels there is continually tranſuding a ſubtile humour, from every point of the body, and throughout the whole expanſe of the cuticle. The matter evacuated this way is found by certain experience to be more than equal to that evacuated all the other ways, *i. e.* by ſtool, urine, &c. Sanctorious found in Italy, under the circumſtances of a moderate diet, middle age, and eaſy life, that the matter inſenſibly perſpired was five-eighths of that which was taken in for food: ſo that there only remained three-eighths for nutrition, and for the excrements of the noſe, ears, inteſtines, bladder, &c.

The ſame author ſhews, that as much as is evacuated by inſenſible perſpiration in one day as by ſtool in fourteen days; particularly, that in the ſpace of a night's time, about ſixteen ounces are ordinarily diſcharged by urine, four ounces by ſtool, and above forty ounces by inſenſible perſpiration. He alſo obſerves, that if a man eat and drink eight pounds in a day, five pounds of it are ſpent in inſenſible perſpiration; and adds, as to the times, that, within five hours after eating, there is perſpired about one pound; from the fifth to the twelfth hour, about three pounds; and from the twelfth to the ſixteenth, ſcarcely half a pound. M. Dodart, from a number of experiments, made thirty-three years ſucceſſively, proves that we perſpire more in youth than in age. In ſome perſons the perſpiration is ſo copious, that they void very little of the coarſer excrements, though they eat heartily. The benefits of inſenſible perſpiration are ſo great, that without it animal life could not be preſerved. The general cauſe of perſpiration is the circulation and heat of the blood, which enables

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The Insensible Perspiration.

W Neurman

it to throw off the offending matter. The great ſubtilty, equability, and plenty of the matter thus perſpired, its increaſe after ſleep, &c. conſtitute the grand ſymptoms of a perfect ſtate of health; and the chief means of preſerving the ſame. On the contrary, the departing from theſe is the firſt ſure ſign of approaching diſeaſes.

Perſpiration is performed, preſerved, and increaſed, by the viſcera, veſſels, and fibres; by motion or exerciſe, as far as the firſt appearance of ſweat; by a moderate uſe of venery; by ſleep of ſeven or eight hours, the body well covered, yet not loaded with bed-clothes; cheerfulneſs; light, fermented, yet ſolid, food, not fat; pure, not heavy, air, &c. The contraries of all theſe, as alſo the increaſe of the other excretions, diminiſh, prevent, and deprave it. Hence we ſee the cauſe and effect of this perſpirable matter, its uſe in preſerving the parts ſoft and flexible, and in ſupplying what is loſt, but chiefly in preſerving the nervous papillæ moiſt, freſh, lively, and fit to be affected by objects, and to tranſmit their impreſſions. Hence it is, that upon a ſtoppage of the uſual perſpiration there ariſe ſo many indiſpoſitions, particularly fevers, agues, rheums, &c. Too much perſpiration occaſions weakneſs, and ſwoonings; whilſt too little, or none at all, occaſions the capillary veſſels to dry, wither, and periſh. Hence alſo the larger emunctories come to be obſtructed; hence the circulation is diſturbed, ſharp humours retained; and hence putridity, crudity, fevers, inflammations, and impoſthumes. Cold prevents perſpiration, by conſtringing the pores of the ſkin, and thickening the liquors circulating in the cutaneous glans; heat, on the contrary, augments it, both by opening the excretory ducts of the glans, and by increaſing the fluidity and velocity of the humours. To determine the ſtate and conditions of the perſpiration, ſo neceſſary for judging of thoſe of the body,

Sanctorious invented a weighing chair, whereby he examined the quantity, degree, &c. of perſpiration in ſeveral circumſtances of the body, under ſeveral temperatures of the air, and in ſeveral intervals of eating, drinking, ſleeping, &c*.

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* It is an observation of this learned Philosopher, that if a physician understands only sensible perspiration and evacuation, and knows not how to regulate the insensible, he does not cure, but afflict his patients; therefore, that the reader may be enabled to investigate this part of physiology more fully, we will subjoin the following aphorisms:

1. Insensible perspiration is transpirable through the pores in every part of the body, and is the excrement of the third concoction; so that if those who have weak stomachs are not capable of perfecting the first concoction, the third cannot be fully accomplished, and therefore inclines the body to various diseases.

2. Redundant perspiration and much sensible evacuation together are inconsistent; also, a copious sensible evacuation, with a deficiency of perspiration, is evil; and this perspirable matter retained, not being resolved by nature, or some disease supervening, immediately disposes the body to a malignant fever.

3. The external causes that hinder perspiration are cold, foggy and moist air, much labour and pain of the body, swimming in cold water, viscous clammy meats, or want of exercise to body or mind; ponderous water, and foggy air, turn the perspirable matter into an *ichor*, or sharp humour, which afterwards causes a cachexy.

4. Insensible perspiration being quite obstructed in the brain, causes *apoplexy;* in the heart, causes *palpitation;* in the matrix, *suffocation;* but in the extreme parts, a *gangrene.*

5. The present effect of immoderate venery is the refrigerating of the stomach, which consequently hinders perspiration: whence comes palpitations and a weakness of the eyes, joints, and the principal members.

6. Those kinds of meat which are most digestible produce the best kind of perspiration; for where there is a difficulty of digestion, there is also a difficulty of perspiration: suppers eaten with the mind troubled, do not properly digest; and nothing retards perspiration more, than to drink when the chyle is forming in the stomach.

7. Exercise of the body promotes the evacuation of sensible excrements, but that of the mind insensible ones. Riding promotes the perspiration most above the loins; ambling is most wholesome; trotting is replete with many evils; but

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Some of the more extraordinary phenomena obſerved in this ſpeculation, are, that for ſome time after eating the perſpiration is leaſt of all; that between the fifth and twelfth hour after meals, perſpi-

the violent motion of a coach evacuates the crude unconcocted perspirable matter, and hurts the solid part of the reins.

8. Violent exercise, where the wind blows, is evil; for the wind stops the perspiration, and the motion makes it acrimonious: by violent exercise the fibres grow hard, whence comes old age; but softness of the fibres, keeping them open, makes long life; but in cold and clear air, although perspiration is stopped, by the pores being condensed, yet as the fibres are roborated, the retained perspirable matter is neither felt nor does hurt; but in foggy air, the perspirable matter is retained by the absorbent vessels being filled with the aqueous property, consequently the fibres are relaxed, and the perspirable matter felt, and very hurtful.

9. By yawning and stretching of the joints, there are great endeavours of nature to void the retained perspirable matter; and to apprehend that we feel ourselves more light than we really are, is a most wholesome state, for that weight of the body is a standard of health, when a person can ascend a steep place with ease.

10. Those who make more urine than is proportionate to their drink, perspire but little; weak persons evacuate the perspirable matter in their urine more in the winter than in the summer; but robust and strong constitutions more in the summer than in the winter; so weak constitutions perspire more in the night than in the day; but robust people more in the day than night; but from the autumnal equinox until the winter solstice, there is every day about a pound of perspirable matter retained; but in summer the retained perspirable matter turns sooner acrimonious than in winter; and, if turned to acrimony in summer, it brings on a malignant fever; but, if operated upon by an external heat, violent motion, or a long continuance, it will produce an inflammation in the bowels.

11. By sadness and fear, the lightest of the perspirable matter is emitted, but joy or anger discharges the heavy with the light. Grief breeds obstructions, hardness of the parts, and hypochondriacal affections; but a contented mind gives a free and equal perspiration.

12. A youthful face is preserved by avoiding sweating, or perspiring too much through heat; but continual exercise, both of body and mind, brings on quickly old age and untimely death.

ration is greateſt; that riding either on horſeback, in a coach, or ſhip, &c. briſk motion on the ice, &c. but, above all, a briſk friction of the ſkin, promotes perſpiration ſurpriſingly; and that perſpiration is naturally much leſs in women than in men. Perſpiration is influenced by the paſſions of the mind. Thus anger and joy increaſe, and fear and ſadneſs leſſen, both perſpiration and urine. Anger cauſes a ſtrong motion in the membranes of the heart; it irritates the arteries and the muſcular ſyſtem, and thus quickens the contraction and dilatation of the blood-veſſels and ſecerning ducts; and of conſequence it increaſes the diſcharges of perſpiration and urine; and that more or leſs, in proportion to the ſtrength and continuance of the paſſion. Joy affects theſe diſcharges in like manner as anger. In the paſſions of fear and ſorrow, perſpiration and urine are leſſened, by the depreſſion of the activity of the ſoul under thoſe paſſions. The proportion of perſpiration to urine is augmented by all thoſe exerciſes which increaſe the motion of the blood, and warm the ſkin.

We have an account of a perſon who, by paſſing many nights in aſtronomical ſpeculations, had his perſpiration ſo obſtructed by the cold and damp of the air in Holland, that a ſhirt he had worn for a conſiderable time was almoſt as clean as if it had been worn but one day. The conſequence of this was, that he gathered ſubcutaneous waters, but was cured in time. The garments beſt calculated to encourage and promote inſenſible perſpiration, to keep the mouths of the minuter veſſels open, and to guard the body from the too ſudden and violent effects of cold, are thoſe made of flannel. Whence flannel ſhirts and waiſtcoats, or a ſquare piece of flannel worn over the breaſt, or pit of the ſtomach, particularly in the winter months, are productive of ſuch beneficial effects to weakly and debilitated conſtitutions, and act as a valuable preſervative to

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the hale and robuſt. In the annexed copper-plate engraving, I have endeavoured to ſhew the manner in which the inſenſible perſpiration iſſues from the pores of the body, which can only be diſcerned by means of a lens; being of ſo volatile and ſubtile a quality, that it paſſes through our garments with the utmoſt eaſe, particularly if woollen; and it even aſcends through the bed-clothes like a miſt, in the greateſt abundance when we are aſleep, and the other animal functions at reſt.

In this manner nature endeavours to relieve herſelf from all caſual obſtructions; and ſo long as diſeaſes are recent, and of a mild tendency, they are uſually carried off by this means, without requiring any aid from medicine. When, however, diſeaſes are of long ſtanding, and the humours in the blood become too foul and viſcous to be thrown off by the *vis medicatricis naturæ*, the whole habit is quickly vitiated, and the circulating maſs becomes morbid; yet even in this infected ſtate, the vital heat and activity of the blood ſtrive to purify it, by determining theſe morbid particles to the ſkin, where they form ſcabs, ulcers, pimples, and other ſpots, as in the ſcrofula, leproſy, ſmall-pox, meaſles, ſyphilis, &c. or elſe the virulent matter is directed inwards, where falling upon the lungs and other viſcera, death quickly enſues. Here then we may view the ſhocking conſequences which reſult from thoſe who enter into matrimony under a tainted or infected ſtate of the blood. Indeed, perſons who are afflicted with the leproſy, ſcrofula, or king's evil, ſhould never marry until a perfect cure has been happily effected, and a pure and healthful ſtate of the blood induced. To enter into wedlock under a venereal taint, is an unwiſe, a moſt cruel, and a moſt ungenerous act. A man, with only a ſlight infection, by contact with the woman, will himſelf, perhaps, experience a perfect cure, in conſequence of the foul and infectious

matter

matter being drawn from the parts by the female organs, ſeconded by the action of the rugæ and abſorbent veſſels on the ſurface of the vagina. But the unhappy female is ſure to take the diſorder, and, ſhould ſhe prove with child, ſhe not only carries the poiſonous infection into the marrow of her own bones, but brings an infant offspring into the world, devoted to miſery and diſeaſe; for whatever foul and infectious humour is implanted in the parent blood, it is immediately carried, by the circulation, to the vital organs of the child, juſt as the flame of one candle is by contact communicated to another. Nor can we be ſurprized at theſe things, if we only reflect on what has already been adduced, and contemplate the ſyſtem and economy of the human frame. Conſider only the powerful effects of a few grains of cantharides, which, if externally applied, act as a burning cauſtic; but if taken into the ſtomach, inſtantly overturn the natural courſe of the circulation, by forcing the whole maſs of blood into the extremities, but more particularly, with great vehemence and turgidity, into the privities; for which reaſon cantharides are taken with intent to cure the weakneſs and debility of the penis; but the truth is that it produces a greater debility; an emaciated conſtitution is ſure to follow, and, not unfrequently, inſtant death.

If, then, ſo powerful an effect can be wrought on the blood by ſwallowing a few irritating particles of a ſmall inſect, may we not juſtly infer, that by infuſing into the circulating maſs, particles congenial to itſelf, the utmoſt relief may be afforded to it, even in the moſt depraved and inactive ſtate? From this conſideration alone, we may venture to pronounce, that all diſorders originating in the blood, might either be prevented or repelled, were ſuch a medium diſcovered, by which we might infuſe immediately into the maſs a combination of

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ſuch elemental principles as the blood and juices themſelves conſiſt of, in their pureſt and moſt elaſtic ſtate; for this, in fact, is the aim of all medicines; but which they miſs by being adminiſtered in their groſs form, and being obliged to paſs the ſeveral digeſtive operations of the ſtomach, before they can reach the blood, whereby the principal part of their occult virtue is loſt among the food, or ſecreted in ſuch ſmall quantities as to produce very little effect. But ſuch a medium, poſſeſſing theſe congenial principles, ready digeſted, and ſo combined as to be taken inſtantly, and without diminution, into the habit, would not only keep the cruor and ſerum in that due proportion which is ſo eſſential to health, but would ſtimulate, correct, purify, and augment the blood, as its reduced or diſordered ſtate might from time to time require. Such a medium, after infinite labour, and unlimited experience, I pronounce the Solar Tincture to be; and ſuch will be found its operative effects, under whatever circumſtances it may be adminiſtered, in any climate or ſeaſon; the innocent and balſamic qualities of which are as grateful to the internal organs of the human frame, as the ſolar rays are cheering to the external; and it affords me no ſmall gratification to avow, that, in offering it to the public, I invade no man's property, nor imitate any medicine at preſent known in public or private practice. The experiments I have made with it upon a variety of diſeaſed wretched objects, are innumerable; and I ſhall ſtill continue to adminiſter it *gratis to the* REALLY *poor*, who are given over by others, or who have not the means of applying for medical aſſiſtance.

The infinite variety of complaints an impure or infected ſtate of the blood induces, almoſt exceeds belief; and hence the new and deceptive forms a ſcrofulous or ſcorbutic taint puts on, which often deceive the moſt eminent of the faculty, and baffle

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the beſt intention towards a cure. An impure or ſcrofulous taint will pervade the nobleſt organs of the human frame, before the patient can be aware of his danger. In the firſt ſtage of its viſible effects, a wearying pain ſeizes the joints and muſcles, attended with a waſting of the legs and loins. In the ſecond ſtage, the gums ſwell, grow painful, hot, and irritable, and bleed upon the ſlighteſt preſſure; the roots of the teeth become bare and looſe, and the breath nauſeous. In the third ſtage, the gums grow putrid, the teeth black and rotten, the ſublingular veins become varicoſe, and the breath cadaverous; fœtid blood diſtils from the lips, gums, mouth, noſe, lungs, ſtomach, liver, ſpleen, pancreas, inteſtines, womb, kidneys, &c. ſcabs and ulcers break out in all parts of the body, and the joints, bones, and viſcera become morbid. In the fourth ſtage, putrid, eruptive, and ſpotted fevers enſue, which end in an atrophy, or elſe follow diarrhœa, dyſentery, dropſy, conſumption, palſy, contractions, melancholy, and all the long and direful train of nervous diſorders, which to deſcribe would fill a volume.

To counteract this moſt virulent of all chronic complaints, the utmoſt exertions of human ſkill have been employed. The remedies preſcribed in its different ſtages are almoſt innumerable. The object is to reduce the virulence of the infection, and to eradicate its ſeeds from the blood and lymph; for which end the mildeſt and moſt ſimple medicines are recommended. Mineral and tar waters, for their warm and ſtimulating quality; milk or whey, from their ſimilitude to the chyle; the cold bath, for bracing the ſolids, and quickening the circulation; antiſcorbutic vegetables, &c. for purging and ſweetening the blood, ſuch as ſcurvy-graſs, water-creſſes, wormwood, hemloc, centaury, vervain, water-trefoil, juniper-berries, the Peruvian bark, ſaſſafras, guaiacum, aloes, aſſafœtida,

aſſafœtida, camomile, diaſcordium, ſaffron, ſenna, rhubarb, manna, Æthiop's mineral, hartshorn, native cinnabar, antimony, &c. When theſe fail, mercury, or a mercurial ſalivation, is looked upon as the only cure; which, in fact, is but to give the human frame its laſt vehement ſhock, and to ſend the wretched patient in agonies to the grave!

The intention of all theſe remedies is to impregnate the blood with qualities oppoſite to thoſe with which it is infected; and this muſt be done in a ſuperior degree of force and power, before a cure can be completed. But theſe medicaments are often adminiſtered under ſuch nauſeous forms, and in ſo crude and unqualified a ſtate, that they not only torture the patient, but miſs entirely their intended aim. The nauſeous taſte of medicine is nothing but its groſſer particles; which, inſtead of entering the ſtomach to irritate and oppreſs its organs, ought to be drawn off by chemical proceſs; for it is the occult virtue of every drug, not its groſſer part, that performs the cure.

Now the peculiar excellence of the *Solar Tincture* is, that it combines the eſſential and occult virtues of all ſcorbutic vegetables, ready digeſted, concocted, purified, and reſolved into an elegant balſamic eſſence, pleaſing to the taſte, and grateful to the ſtomach. It flies immediately to the heart, whether internally or externally applied, blends and aſſimilates with the venal and arterial blood, which it generates, corrects, warms, purifies, animates, and impels, through the whole ſyſtem. It cleanſes all the viſcera, and glandular parts, eſpecially the lungs and kidneys; ſtimulates the fibres, whereby the gaſtric juice and digeſtion are promoted; diſſolves viſcid humours, and expels infection. It exerts very conſiderable effects on the whole nervous ſyſtem, ſenſibly raiſes the pulſe, ſtrengthens the ſolids, and invigorates the animal ſpirits. It penetrates into the moſt innate parts, opens the mouths of the minuter veſſels, reſtores

the natural perſpiration, and promotes all the fluid ſecretions. In every ſtage of infectious diſeaſes, and in all ſudden epidemical diſorders, which uſually follow from wet, putrid, and unwholeſome ſtate of the atmoſphere, it is an abſolute ſpecific; and as a preventative, alterative, and purifier of the blood, it has not its equal in the world. It quickly relieves every common malady originating in the blood, ſuch as relaxations, debility, laſſitude, tremours, ſinking of the ſpirits, and all thoſe nervous affections which haraſs and oppreſs the weak, ſedentary, and delicate; and are often the conſequences of high living, and luxuriant indulgences, without bodily exerciſe and freſh air. In all theſe caſes, the Solar Tincture is calculated to warm and ſtrengthen the cold tremulous nerves; to ſheath and invigorate the muſcular ſyſtem; and to animate the ſpirits, and renovate the whole man; whereby the chill watery fluids become rich and balſamic, and the circulating maſs reſumes its healthful ſtate. It is an infallible cure for joint-aches, cramps, ſpaſms, rheumatic gout, nervous head-ache, agues, and all diſorders ariſing from obſtructed perſpiration. In complaints of the breaſt, ſtomach, and bowels, it gives immediate relief; and in aſthmatic and conſumptive caſes, is an elegant and expeditious cure. It will ſtop mortification in very advanced ſtages, by expelling the poiſonous matter, and correcting the juices of the whole body. It requires no argument to convince, more than a ſingle trial; after which, I think, no family who value their health or life will chooſe to be without it; particularly under any of the following afflictions:

SCROPHULA, SCURVY, OR KING'S EVIL.

In the firſt and ſecond ſtages of this diſorder, a ſmall table-ſpoonful of the Tincture, taken in a wine-glaſs of cold ſpring-water, night and morning,

ing, will prevent the further progreſs of the diſeaſe, and in a very ſhort time reſtore the blood to its healthful ſtate, the effects of which will be ſo obvious to the patient, that he will be at no difficulty when to diſcontinue the medicine. In the third ſtage, it is often requiſite that the medicine be internally and externally applied. The mouth ſhould be frequently waſhed with the Tincture, diluted in warm water, and it will very ſoon expel the poiſon from the gums. If the viſcera be in a morbid ſtate, which may be known by the excrements, or foulneſs of expectoration, it will be neceſſary to take the medicine, night and morning, for ſeveral days, in the quantity of a table-ſpoonful *undiluted;* and at noon, a table-ſpoonful in the ſame quantity of warm water. The ſcabs, whether dry or moiſt, ſhould be frequently waſhed with the Tincture, *undiluted*, which being abſorbed by the minuter veſſels, and taken into the habit, will expel the humour, and clear away the ſcurf. If tumours or foul ulcers occur, waſh them frequently with a dilution of the medicine in the ſame quantity of warm water, until the heat and virulence be abated; then apply the Tincture, *undiluted*, with lint or fine rags, by which means the infectious matter will be totally eradicated, the blood and juices purified, and the ulcers healed.

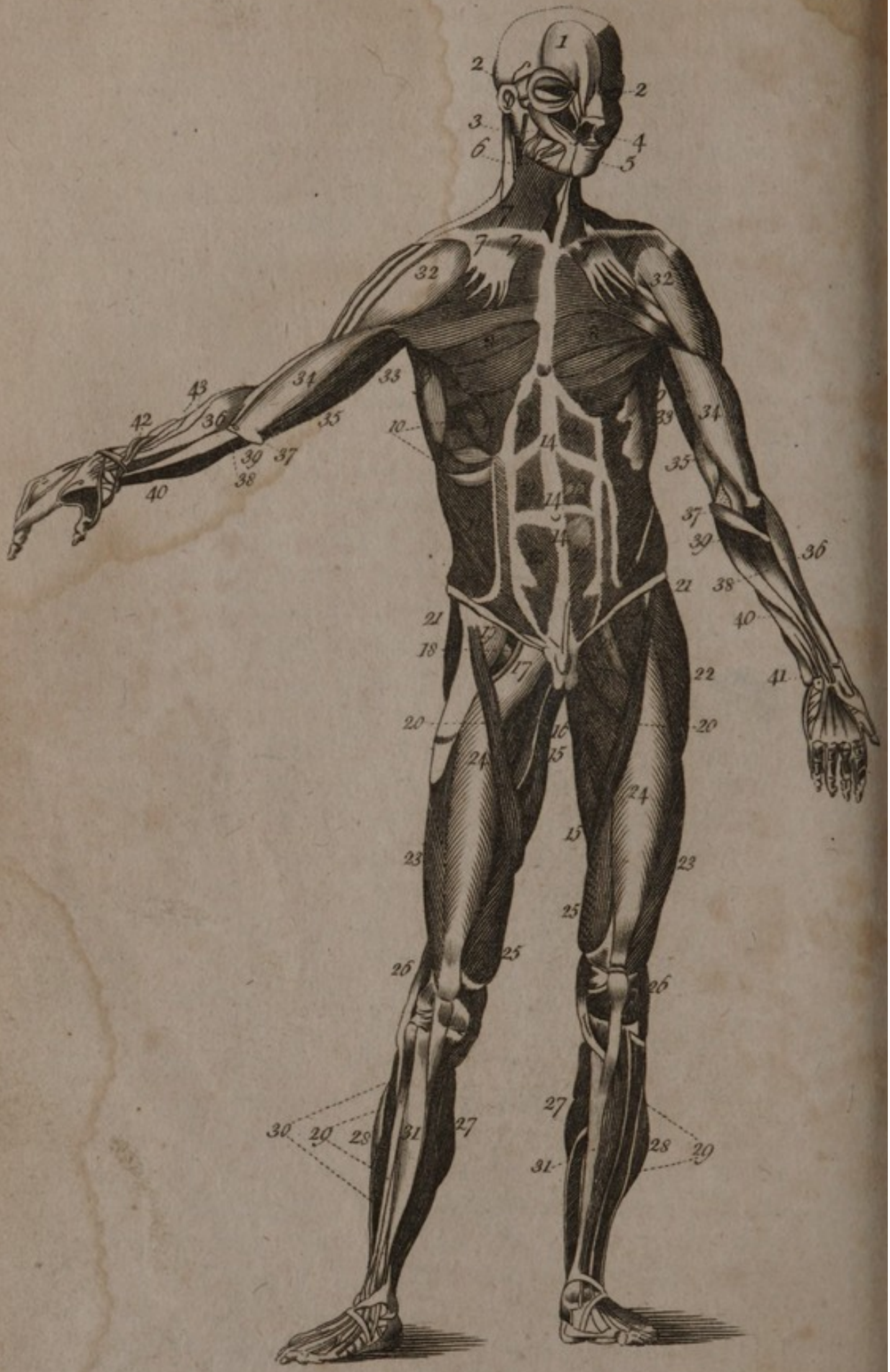
In the fourth ſtage, whatever may chance to be the ſad malady to which the diſorder ultimately turns, a ſtrict attention to regimen, exerciſe, and freſh air, as far as the ſtrength and condition of the patient will admit, muſt be particularly attended to. And, in all theſe caſes, the beſt and moſt ſimple methods of treatment are laid down in the medical part of my Family Phyſician, page 168, &c. to which I beg leave to refer every patient in this dreadful ſtage of the diſeaſe; and, in aid of the advice there given, let the Solar Tincture be regularly perſiſted in, every night and morning, in the

quantity of one table-ſpoonful in as much warm water; and, at twelve o'clock at noon, take a table-ſpoonful *undiluted*.---Let this be continued eight or ten days; then take a table-ſpoonful diluted in warm water three times a day, morning, noon, and night, till the nerves and organs begin to reſume their healthful tone; then let the doſes be gradually abated to a ſpoonful in water every other morning, which ſhould be continued till health is perfectly re-eſtabliſhed; and which, by GOD'S bleſſing, will generally happen, even in theſe deſperate caſes, in the courſe of a month or ſix weeks. ---As a preventative of all foul or ſcrofulous taints in the habit, and as an alterative, and purifier of the blood, it may be occaſionally taken every other morning, for a week together, particularly in the ſpring and fall, in the quantity of a table-ſpoonful in a wine-glaſs of cold ſpring-water; or it may be occaſionally taken as a beverage after dinner or ſupper, mixed in a tumbler with warm water, and made palatable with ſugar. It will be found pleaſant to the taſte, and grateful to the ſtomach, ſuperior to any ſpirits or punch. The many inſtances of elegant and uncommon cures effected by the Solar Tincture, on perſons of the firſt eminence, may be inſpected at any time, on application at my houſe. But, at the particular requeſt of the party, I have here added the following remarkable

CASE.

Mr. R. Pinder, of Bramſtone, near Bridlington, in Yorkſhire, had been long afflicted with a violent ſcorbutic humour in his blood, which threw out ſometimes dry and ſometimes moiſt ſcabs and tumours on the ſkin. Being neglected, it at length pervaded the whole ſyſtem, till, turning inwardly, it fell upon his lungs, and reduced him to the laſt ſtage of a conſumption. In this deplorable ſtate,

given



The Muscles of the Human Body

W.Newman

given over by the faculty, left totally emaciated, and incapable of turning in his bed, he fortunately had recourſe to the Solar Tincture. The firſt doſe was given *undiluted*, which threw him into a fine perſpiration, and compoſed him to ſleep, which had long been a ſtranger to his eyes. After one large bottle had been adminiſtered agreeably to the bill of directions, at the end of a week he was ſo much reſtored, that with very little aſſiſtance he was enabled to put on his own clothes; and, after continuing the medicine for little more than a month, he was able to walk abroad. And now, having continued the Tincture night and morning, and occaſionally uſing it as a beverage made ſimilar to warm brandy and water, he has quite recovered his former health and ſtrength; being, to the ſurpriſe of every body who beheld him in his late emaciated condition, as robuſt and hearty as it is well poſſible for a man to be.

DEBILITATED, TAINTED, AND ENFEEBLED CONSTITUTIONS.

MUSCULAR debility was a misfortune but little known to our forefathers. Whether immured in venereal embraces, or ſacrificing at the ſhrine of Bacchus, moderation and ſeaſonable hours directed the meaſure of their enjoyment. If revelry or voluptuouſneſs by chance unſtrung their nerves, gymnaſtic exerciſes and field-ſports, or the more pleaſurable delights of the chaſe, quickly reſtored them to their proper tone, gave new vigour to the blood, health to the cheek, and lighted up afreſh the flame of love. But now, how ſtrange the reverſe! Habituated to effeminacy, and fed with dainties; revelling all night with wine, and ſtretched on beds of down all day; ſhut up in ſtews and brothels, ſcarcely breathing wholeſome air; claſped in the arms of tainted or diſeaſed females, until enjoyment palls upon the ſenſes, and the muſcular

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powers abſolutely refuſe their office; no wonder ſo many men are found old in every thing but years; whoſe conſtitutions are fairly worn down; blood ſtagnant, ſolids relaxed, ſecretions diverted from their proper courſe, muſcles debilitated, eyes ſunk, palid cheek, and ſpirits gone. Theſe are not half the evils reſulting from this faſhionable ſource of deſtructive folly. It may not be amiſs, however, to deſcribe the remarkable caſes of a few, of whom the Solar Tincture has made perfect cures, by infuſing a new portion of health into the maſs of blood; ſincerely hoping, that a more wiſe and manly courſe of life will ſhortly eradicate theſe diſgraceful complaints, and reſtore to the ladies a genuine race of Engliſhmen and Britons.

CASES.

PREMATURE DEBILITY.

A gentleman in the army, under thirty years of age, complained to me, that he had all at once *become incapable of enjoying his wife.* Suſpecting he was not married, I deſired him to be open and candid, to relate to me his *real* ſituation, and not a *pretended* one, which was only to impoſe on his own underſtanding. He thanked me for the rebuke, ſaid he would be frank, and in a few words declared, that from exceſſive luſt, and continual debauch, he had loſt his virility; and, to add to the misfortune, he was really on the eve of entering into the marriage ſtate. In other reſpects he felt no diminution in his health or conſtitution; and from external appearances, this was ſurely the laſt imperfection that could have been ſuſpected. His complexion was vigorous and lively, his fleſh firm, and conſtitution excellent; yet, notwithſtanding this, he was impotent to ſuch a degree, that neither the ſtrength of his own deſires, nor the excitations of the female, could affect the part. It often

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often happens, that though the organs remain ſound, yet if the nervous and ſeminal fluids have degenerated from a healthful ſtate---if they are impoveriſhed by being too much drained, or turned into an unnatural courſe, they cannot then perform their office, becauſe their moving powers, and ſtimulus on the blood, are become too weak to direct their force and action in the manner nature requires in the act of copulation. I therefore enjoined him to abſtain entirely from all attempts of the kind for three months at leaſt; directed the ointment as in page 240 of the medical part of my Family Phyſician, with the Solar Tincture three times a day for two months; then twice a day, until he found it no longer neceſſary. After taking ſix large bottles, he generouſly thanked me for a more hale and robuſt ſtate of body than he ever remembered to have enjoyed before. He has ſince ſent me ſeveral patients, in almoſt as debilitated a ſtate as he was himſelf, who are now ready to unite with him in giving full teſtimony to the renovating powers and peculiar efficacy of the Solar Tincture.

A RELAXED HABIT.

LITTLE more than three months ago, a gentleman, about fifty years of age, lately returned from the Eaſt-Indies, applied to me for the cure of what he termed a *broken conſtitution*. He had made very free with the ſable beauties of Bengal---had undergone a mercurial ſalivation, and appeared to be ſinking under an univerſal langour and debility of the whole muſcular ſyſtem. The ſphincter of the bladder was ſo weakened, that the urinary ſecretion came from him by drops, in ſo perpetual and involuntary a manner, as not to be perceived until the moiſture of one ſet of cloths became ſo ſenſibly afflicting, as made it neceſſary to ſupply freſh ones, which uſually happened every hour. The corporeal functions were diſſipated and relaxed,

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and the tone of the ſtomach and viſcera was nearly gone; the tremulous nerves reluctantly performed their office, and the circulation was become ſtagnant and morbid. I adviſed an immediate recourſe to the moſt nouriſhing food, with ſtrong port-wine negus for his drink; and the Solar Tincture to be taken four times a day for the firſt month; three times a day for the ſecond month; and once or twice a day afterwards, as occaſion might ſeem to render neceſſary. Before the expiration of twenty days, the ſphincter muſcle acquired its proper tone, the pulſe became ſtrong and regular, and the nervous tremours were conſiderably abated. By the end of the ſecond month, a renovation of the whole animal economy ſeemed to have taken place, and a viſible accumulation of the blood and juices had retrieved the circulation. Before the expiration of three months, I had the gratification to ſee this patient reſtored to ſuch a ſtate of bodily health and ſtrength, as utterly aſtoniſhed himſelf, by this courſe of the Solar Tincture.

HYPOCHONDRIACAL DEBILITY, OR WEAK NERVES.

A gentleman in Oxfordſhire lately came to town on purpoſe to conſult me in this complaint. He appeared to be near thirty years of age, of middling ſtature, but of a weakly conſtitution. He had, for upwards of ſeven years paſt, paid his addreſſes to a lady, whom he had long promiſed, and very much deſired, to marry; but whenever he propoſed in his mind to fix the day, or whenever it happened that he attempted to ſalute or embrace her, he was ſeized with an unaccountable tremour of the whole body; his ſpirits ſunk, his virility left him, and a violent palpitation of the heart enſued. In ſhort, he was ſo diſtruſtful of his own powers, that he confeſſed it was the fear of not being able

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to perform the rites of the marriage-bed, that had been the only and the ſole cauſe of thus protracting his wedding-day. This is certainly a moſt ſingular inſtance of the hypochondriacal affection, and of its derangement of the nervous ſyſtem. The debility induced by it ſeems to ariſe from the weaker energy of the brain, the fault of which, however, cannot be detected by the niceſt anatomiſt. For this reaſon, we are not well acquainted how ſuch a defect ſhould be reſtored; but as nature, ſeemingly for this purpoſe, excites the motion of the heart and arteries, we muſt aſcribe the continuance of ſuch debility to the too weak re-action of the ſanguiferous ſyſtem. The heart will generally palpitate from a violent excitement of the nerves, eſpecially when the blood is endowed with too ſmall a ſhare of ſtimulus. Hence, therefore, palpitation from any affection of the mind, and from hyſterics in women. Under whatever circumſtances this hypochondriacal affection happens, it debilitates the whole animal machine, and renders the perſon unable to perform the proper offices of life. The proſtration of ſpirits, added to weakneſs and languor, are often ſurpriſingly great, though the pulſe ſeem tolerably ſtrong, as being heightened by animal deſire. The effect, however, is ſure to produce a languid circulation, the blood ſeeming to adhere, with uncommon energy, about the region of the heart. I ſuſpect it is in theſe caſes that cantharides are moſt frequently uſed. This patient, upon interrogation, acknowledged indeed, after ſome heſitation, that he had tried them; but they only produced an involuntary though violent erection, by no means adapted to the cure, nor to the purpoſe he intended. Hence this remedy is not only inadequate, but muſt prove extremely dangerous; for it too much exhauſts the vital powers, and is followed by a vaſt dejection of ſpirits, tremours, ſtarting of the

tendons, &c. which bring on rigours, cold clammy ſweats, ſyncope, and ultimately premature death.

The means, therefore, which nature points out for the cure of this ſpecies of debility are directed to ſupport and increaſe the action of the blood through the heart and arteries; and the remedies to be employed are tonics and ſtimulants. Of all the ſtimulants which in this conſtitutional defect may be advantageouſly employed, *real* port-wine ſeems to be the moſt eligible. It has the advantage of being grateful to the palate and ſtomach, and of having its ſtimulant parts ſo much diluted, that it can be conveniently given at all times and ſeaſons, and may be employed with ſufficient caution; but it is of little ſervice unleſs taken pretty largely.--- It may be ſuſpected that wine has an operation analogous to that of opium; and on good grounds. But we can diſtinctly mark its ſtimulant power only; which renders its effects in the phrenetic delirium manifeſtly hurtful; in caſes of debility, however, remarkably uſeful. Hence I directed the Solar Tincture to be taken morning, noon, and night, in ſtrong doſes, for the firſt month; once a day, or oftener, at the diſcretion of the patient, until the end of the third month, and my Cooling and Cleanſing Powders twice a week; but to drink every day, after dinner, a pint of generous port; and to inform me at intervals of the change he might find in his conſtitution. He took with him a dozen large bottles of the Solar Tincture, and before a month elapſed, I had the pleaſure of receiving an epiſtle of unfeigned thanks. He found himſelf ſo much reſtored by the courſe I laid him under, that, before the expiration of the three months, he married the lady; and I am happy to find that he has ſince had iſſue. I have been ſomewhat more elaborate in deſcribing the particulars of this caſe, having reaſon to believe it is not an uncommon malady, and would therefore wiſh

to

to enable every patient to become as much as poſſible a judge of his own infirmity.

NOCTURNAL EMISSIONS, OR INCONTINENCE OF THE SEMEN.

A YOUNG man, of robuſt make, and in the prime of life, being under twenty-ſix years of age, applied to me for relief in the above unfortunate complaint. It appeared that, from the time of puberty, he had found a weakneſs in the part, and an occaſional diſcharge of the ſemen, upon the ſlighteſt irritation. As he grew up to greater maturity, the malady increaſed upon him. Upon every attempt to have contact with a female, the ſemen paſſed involuntarily from him, before even a complete erection could take place, whereby his purpoſe was continually defeated. This defect grew upon him, until the bare ſight or thought of any thing which tended to excite venereal deſires brought away the ſemen; yet it had no affinity whatever to a gleet, becauſe the emiſſion never occurred but either in the attempt, or in the deſire, of copulation; or under the influence of laſcivious dreams. In proportion as this weakneſs grew upon him, his deſire of familiarity with the ſex became the ſtronger; and, I am inclined to think, was the principal reaſon of the increaſe of the malady, and of the nocturnal emiſſions, which happened more or leſs every time he went to ſleep. This inceſſant diſcharge had reduced him to a meagre viſage, ſallow complexion, hollow eyes, depreſſion of ſpirits, and ſlow fever; and a violent *tabes* would ſoon have followed. I directed the Solar Tincture every morning at ſun-riſing, at mid-day, and at ſix o'clock in the afternoon, in the quantity of a wine-glaſs full, with one-third of cold water; and every night at going to bed, twenty drops of liquid laudanum, for the purpoſe of making his ſleep too ſtrong to be affected by the influence of dreams. This courſe,

aſſiſted by a ſtrengthening regimen of calf's-foot-jelly, veal-broth, and ſtrong port-wine negus, had very quickly the deſired effect. His ſleep was perfectly ſound and calm, and, after the third night, he could not recollect the return of any nocturnal emiſſion. The ſtrengthening ointment, directed in page 240 of my Family Phyſician, was uſed every other morning; and, within the ſpace of only two months, the ſeminal veſſels were completely braced up, and the diſorder ſo totally removed, as not to leave a ſingle ſymptom of his former weakneſs.

ONANISM.

A YOUTH, apparently under age, applied to me for the cure of a diſorder, which, he ſaid, had deprived him of the power of erection, and of all ſenſation in the privities. In ſo young a ſubject, I could not ſuppoſe this want of tone aroſe from a general debility of the nervous ſyſtem, particularly as no other ſymptoms warranted ſuch a concluſion. I had a ſtrong ſuſpicion it was the effect of Onaniſm, or ſecret venery, which uſually ends in this ſpecies of abſolute impotency; but this he denied. He told me he had ſome time ago contracted the foul diſtemper, and through ſhame, and the dread of its coming to the knowledge of his parents, he had neglected to diſcloſe his misfortune to any perſon, until the preſent malady was brought on. Of the foul diſtemper, however, I could find no other ſymptom than a ſimple gleet; and, upon putting the neceſſary queſtions, not a ſingle reply correſponded with the uſual effects of that diſorder. After half an hour's cloſe examination, I brought him to confeſs what I above ſuſpected, that he had ſo much addicted himſelf to this ſhameful and deſtructive vice, that the ſeminal veſſels were completely relaxed; the erectories, the nerves, and glans of the penis, had entirely loſt their tone; an involuntary diſcharge of the ſemen, without irritation,

tation or turgidity of the parts, had long taken place, and brought on a want of appetite, an impoverished state of the blood, and an universal lassitude of the body. The lecture I gave him upon this occasion, will never, I trust, be effaced from his memory; and he has since faithfully promised that it shall not. I directed the strengthening electary and ointment, in page 239 and 240 of my Family Physician, to be used as therein prescribed; then to take, four times a day, a tablespoonful of the Solar Tincture in an equal quantity of warm water, for a month at least; then three times a day for the second month, and twice a day, in cold spring-water, for the two months following; which gradually coiled up the debilitated parts, gave elasticity to the blood, retrieved the sensation of the glans, and the sympathetic office of the erectories, braced the nerves, ligaments, and tendons, and gave that due tone and energy to the muscular system, which, in less than four months, restored the patient to perfect health and vigour.

AN IMPURE OR TAINTED HABIT.

This malady, so common among our dissipated youth, generally arises from a venereal complaint badly cured. Indeed the scrofula, the king's evil, the leprosy, and other foul humours, when too long suffered to prey upon the blood, will naturally induce this consequence; yet ninety-nine cases out of every hundred are found to result from the improper use of mercury, either taken too abundantly into the stomach, or too often applied externally, in the venereal disease. A gentleman in the militia very lately came to me under this misfortune, who had absolutely worn down the organs of his stomach by taking medicines for its cure, without obtaining the smallest relief. He was no sooner warm in bed, than deep-seated nocturnal pains attacked his arms, shins, and head, which many of the faculty

faculty miſtook for rheumatiſm. The membranes, muſcles, and ligaments of the joints, were ſcarcely ever free from pain; whilſt carious ulcers occaſionally broke out upon the ulna, tibia, and bones of the cranium. Theſe ſymptoms had alſo deceived ſeveral of the faculty, who, taking his complaint to be a confirmed lues, ſtill added to the malady, by loading him with freſh doſes of mercury. The truth is, that this diſorder was by no means of a venereal nature, but was rather the conſequence of the remedy than of the diſeaſe, ſince it aroſe entirely from the long and repeated doſes of mercury his body had ſuſtained, and which was grounded in his habit by ſalivation. The mercury had inſinuated itſelf into the marrow of his bones, had vitiated every fluid ſecretion, and tainted the very air he breathed. Under ſuch circumſtances, I will allow it is very difficult, if not almoſt impoſſible, for a phyſician, upon a ſuperficial inſpection, abſolutely to decide whether the original diſeaſe hath been altogether overcome; yet ſurely he ought attentively to diſtinguiſh and conſider the ſeveral ſymptoms apart; and then, by comparing them with each other, a clear judgment may be formed upon the general retroſpect. Finding, by this method, the real ſtate of the patient's caſe, I ordered him a nouriſhing diet, gentle exerciſe, and an abſolute denial of the leaſt intercourſe with women. To this he regularly ſubmitted, putting himſelf under a regular courſe of the Solar Tincture, which he took, three times a day, in the quantity of a wine-glaſs three parts full, filled up with cold water, for the firſt month. At the expiration of this time he paid me a viſit, when his company was infinitely *more agreeable*, becauſe the pleaſing aſpect of health had ſuperſeded the nauſeous effluvia of his diſeaſe. I now only enjoined him to follow the ſame regimen and *abſtemious* mode of living for a month or two longer,

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taking the Tincture, diluted in a glaſs of cold ſpring-water, once or twice a day, as he might find himſelf inclined. This he rigidly attended to; and I have now the pleaſure to declare, that only nine large bottles of the Solar Tincture have reſtored this gentleman from the moſt dangerous and deplorable ſtate of a tainted and corrupted habit, to ſound health, and a renovated ſtate of the blood and juices.

A TAINTED HABIT IN A STATE OF PREGNANCY.

THIS is the moſt ſhocking caſe my practice or experience ever produced. The patient was taken in labour, and in the act of parturition the child preſented its right arm, which ſeparated from the body while the operator was returning it into the uterus. The life of the mother being deſpaired of, I was ſent for; when, on inſpection, I quickly perceived conception had taken place under an infected ſtate of one of the parents. I performed the reſidue of the operation myſelf, and brought away the fœtus without a farther ſeparation of the joints, but with great difficulty, ſince it was ulcerated, and half rotten with diſeaſe. By a moſt tender and judicious treatment of the woman, aſſiſted by the Lunar Tincture, her life was preſerved; and in the ſpace of five weeks ſhe appeared to have regained her health and ſtrength; when, to the aſtoniſhment of every one, ſhe fell into a violent ſalivation. Being ſent for upon this ſingular occaſion, I thought it right to interrogate the huſband; when, after a vaſt deal of heſitation and diſſembling, he confeſſed having had connection with his wife under a venereal infection; and with a view to prevent the conſequences, he had prevailed on her to ſwallow ſtrong doſes of mercury, which I have reaſon to ſuppoſe lay dormant in the body until after her delivery; when the efforts of nature being no longer directed to the preſervation

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of the child, ſuffered the mercury to attack the ſalival glans, and to produce the effect we have juſt deſcribed. I ordered her a ſpare but nouriſhing diet; worked off the mercury in the cuſtomary way, and then began a courſe of the Solar Tincture. A table-ſpoonful in an equal quantity of warm water, was taken four times a day for the firſt week; then three times a day until the end of the month; afterwards twice a day, or every other day, as the patient found convenient; by this means ſhe happily experienced a complete cure, in leſs than three months, and now enjoys a perfect ſtate of health, deſirous of certifying the fact to any unfortunate female, who, under ſimilar circumſtances wiſhes to call upon me for that purpoſe. Indeed every woman who has the misfortune to ſuſpect even the ſmalleſt taint of a ſimilar nature to be lurking in her blood, ſhould put herſelf under a courſe of the Solar Tincture, and perſiſt in it, night and morning, in the quantity of a table-ſpoonful in a wine-glaſs of cold ſpring-water, during the whole nine months ſtate of pregnancy.

The above caſe reminds me of having read in a monthly magazine, a very ſingular inſtance of an accidental ſalivation, brought upon a young lady by a foreign ſubſtance irritating one of the parotid glans; the particulars of which I ſhall here inſert for the ſake of thoſe who may happen to be under ſimilar circumſtances. In the month of April, 1751, a young lady, about the age of ſixteen years, of a delicate habit, but ſubject to no particular complaints, perceived the beginning of a diſeaſe, which afterwards proved moſt obſtinate and loathſome, viz. an inceſſant ſpitting. The quantity of this diſcharge varied at different times, from one pint to two pints and a half in twenty-four hours. As to its quality, it ſeemed to be no other than the ordinary ſecretion of the ſalival glans.

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By ſo large and conſtant an evacuation, her ſtrength became extremely impaired, and the moſt efficacious medicines had proved uſeleſs. She had taken large quantities of the Peruvian bark, both alone and combined with preparations of iron; and afterwards the fœtid gums, opium, amber, alum, and the Neville Holt-water, had in ſucceſſion been given her. In the mean time an exact regimen had been preſcribed: ſhe had been ordered to ride conſtantly; and to confine herſelf to a mucilaginous diet, ſuch as veal, calves' feet, &c. Likewiſe a gently opening medicine had now and then been interpoſed: nevertheleſs the diſeaſe ſtill continued. She had afterwards tried the *tinctura Saturina;* and had, at the ſame time, been encouraged to chew the Peruvian bark, and to ſwallow the ſaliva. But all theſe attempts were vain; and after ſhe had taken ſome or other of the medicines above mentioned, until the end of September, 1753, namely, above two years, it appeared to her phyſician, Sir George Baker, unreaſonable to expect relief in ſuch a caſe from any internal medicines whatever. He now conceived a ſuſpicion, that ſome extraneous body, having accidentally found its way into the *meatus auditorius*, might poſſibly be the cauſe of this extraordinary ſecretion, by keeping up a continued irritation in the parotid glans. With this view he examined her ears, and extracted from them a quantity of fœtid wool. How, or when, it came thither, no account could be given. To this ſubſtance he attributed the beginning of the ſalivation, notwithſtanding that the diſeaſe did not immediately abate on the removal of the wool; as it appeared to be no improbable ſuppoſition that the diſcharge might be continued by the force of habit, though the original cauſe no longer remained. It ſeemed therefore expedient to introduce ſome other habit, in the place of the increaſed ſecretion of ſaliva;

which habit might afterwards be gradually left off. With this intention, he prevailed on the patient to chew perpetually a little dry bread, and to ſwallow it with her ſpittle. In a few weeks it became neceſſary for her to chew the bread only at certain hours in the day; and thus, after two months, ſhe became entirely free from a moſt diſguſtful and tedious diſorder. It is worthy of obſervation, that, at firſt, the ſwallowing of ſo much ſaliva frequently occaſioned a nauſea; and that then, for a few hours, ſhe was obliged to ſpit it out as uſual; and that, during the greateſt part of the time when ſhe chewed the bread, ſhe had a ſtool or two every day more than common.

TABES DORSALIS, OR CONSUMPTION OF THE BACK.

A YOUNG gentleman, twenty-two years of age, applied to me in the above diſorder, which had worn him down to a mere ſkeleton. The tabes is ſeldom diſtinguiſhed by any remarkable fever, cough, or difficulty of breathing; but is attended with want of appetite, a weak digeſtion, and a morbid ſtate of the blood, whence the body grows languid, and waſtes by degrees. Sometimes this ſpecies of conſumption is brought on by a venereal ulcer; but it moſt commonly proceeds from exceſſive evacuations of the ſemen, which was the caſe with this patient. He had too early addicted himſelf to an intercourſe with lewd women, that eventually brought on an involuntary ſhedding of the ſemen, which came from him on the leaſt exertion, whether of walking, riding, lifting a weight, or even of pulling off his clothes. I ordered him a ſtrong nutritious diet, with a table-ſpoonful of the Solar Tincture four times a day, in the ſame quantity of warm water, which he purſued for a month. He found his ſtrength ſo much recovered, that I could ſafely adviſe moderate exerciſe,

exercise, both on horseback and on foot. The gleet, however, was uncommonly obstinate; and the Tincture was continued for the second month in the same quantity. By this time the parts were considerably braced; he could run or jump without perceiving the smallest emission, and the healthful colour of his cheeks began to return. He now persisted in the Tincture only three times a day, for a month longer; after which the dose was reduced to night and morning for another month; he then took it twice a day for three months more, at the end of which period every symptom of the complaint was removed, he had fully recovered his flesh and strength, and now preserves it by taking the Solar Tincture as a beverage, made after the manner of brandy-and-water. This disorder has in general been deemed incurable. It is true, that, even in its early attacks, it is so essentially necessary to abstain from venereal embraces, that without it the best remedies will prove altogether useless; hence the Tabes Dorsalis so often proves mortal, because the patient has seldom resolution enough to dispense with his amours.

RHEUMATIC GOUT.

This disease is generally brought on by alternate heats and colds in the blood, whereby a humour is produced which attacks the joints and muscles, sometimes accompanied with discolourations and swellings, and at other times without either; but it is always attended with excruciating pain. Mr. John Brandham, of Bridlington Quay, was attacked in this manner; when, after some time, the severe pain of his joints falling into his legs and thighs, deprived him of the use of his limbs, and confined him entirely to his bed. He was soon seized with a violent pain in his head and stomach, which so much affected his respiration, that instant

death was expected. In this extremity, half a wine-glaſs of the Solar Tincture was adminiſtered, *undiluted*, which removed the danger, and gave his ſtomach immediate eaſe. A table-ſpoonful, in the ſame quantity of warm water, was then given every third hour, during the ſucceeding day and night, by which the pains were conſiderably abated. He continued the medicine four times a day for a month longer; at the expiration of which time he experienced a perfect cure, and has never ſince found the ſmalleſt return of his complaint; of which he is deſirous to ſatisfy any enquirer, who chooſes to apply for that purpoſe.

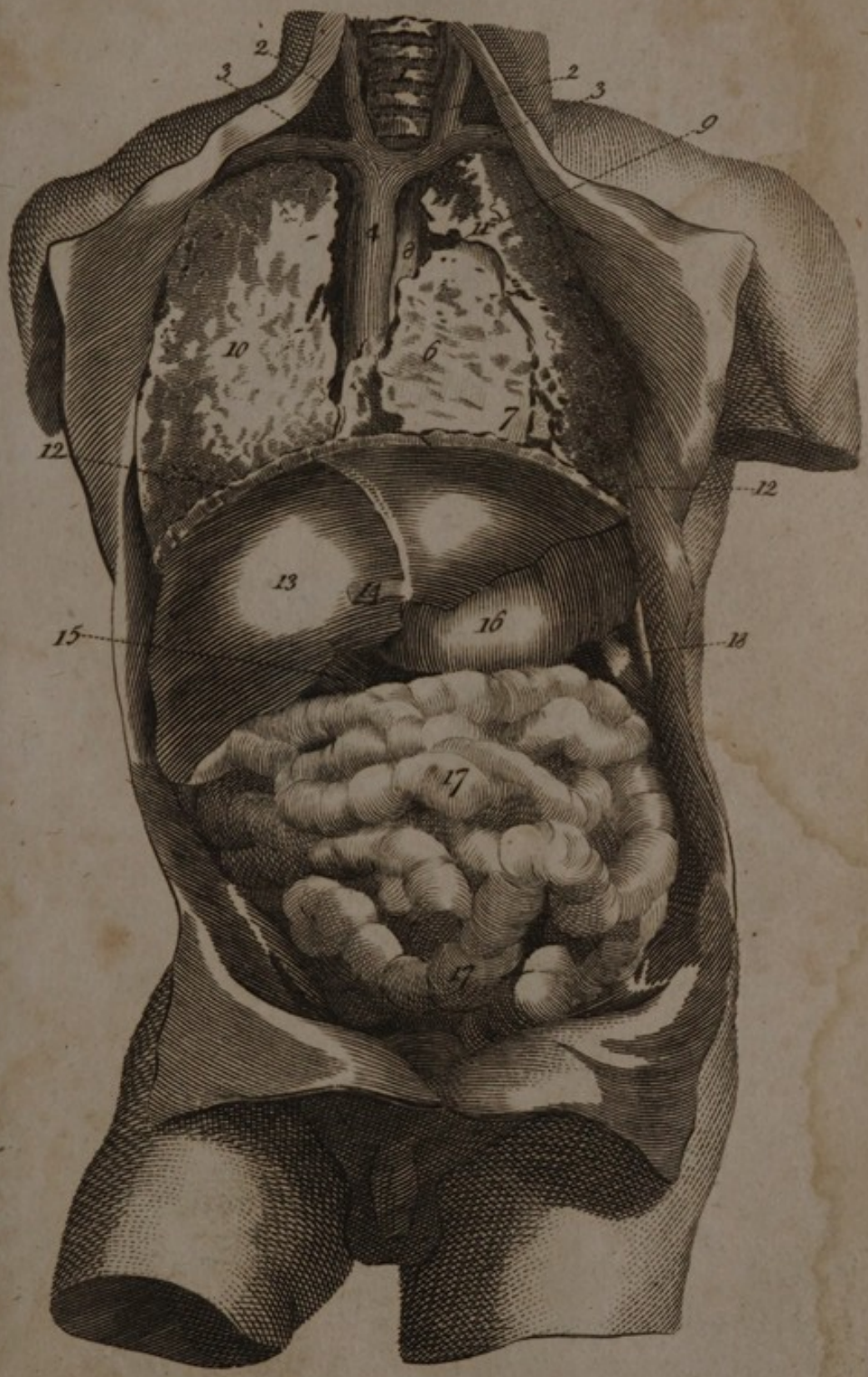
AGUES, CONVULSIONS, CHOLIC, BLOODY-FLUX, AND VIOLENT SPASMS IN THE STOMACH AND BOWELS.

DURING the fit, let one or two table-ſpoonfuls of the Solar Tincture, *undiluted*, be adminiſtered ſucceſſively, as the extremity of the caſe may require; and afterwards let the patient continue the medicine, night and morning, in the quantity of a table-ſpoonful, in a wine-glaſs of warm water, or oftener, as the obſtinacy of the caſe may render neceſſary, and in a very ſhort time a perfect cure will be experienced; a few inſtances of which I ſhall add, in the words of thoſe who have tranſmitted me the facts:

To E. SIBLY, M.D.

SIR,

A FEW nights ago, I was attacked in bed with a violent pain in my ſtomach and bowels, which alternately produced ſuch a ſucceſſion of convulſive ſpaſms and cold chills, that I really thought I was ſeized for death. Fortunately, a bottle of your Solar Tincture was in the houſe, purchaſed the day before by my ſon, of which my ſervant gave me a table-ſpoonful and a half, unmixed with water.



A View of the Situation of the Thoracic and Abdominal Viscera, the Omentum being Removed.

W. Newman sculp.

water. The inſtant effect it had on my ſtomach I could only compare to electricity; for, to the aſtoniſhment of all about me, the ſpaſms inſtantly ceaſed, a gentle perſpiration came on, in which ſtate I fell aſleep, and did not awake till the morning, when I found myſelf entirely free from pain. On getting up, I took a ſpoonful more of the Tincture, in an equal quantity of warm water, and have not ſince experienced the ſmalleſt return of the diſorder. Requeſting you will make this known, for the benefit of others, I remain, with grateful eſteem, &c.

M. ARMSTRONG.

No. 25, Philpot-lane, Fenchurch-ſtreet,
Feb. 12, 1794.

To E. SIBLY, M.D.

SIR,

IN gratitude, I cannot but thank you for that excellent medicine, the Solar Tincture. It has ſaved my life. I was ſuddenly ſeized with a violent cholic, which brought on a mortification of the bowels. The efforts of the faculty were tried in vain, and I was given over. In theſe moments of extremity, my exiſtence was preſerved by only two ſpoonfuls of your medicine, *undiluted*, which inſtantly relieved me from the rack of torture. After two more doſes, the obſtruction was removed by natural evacuation, and a few hours reſtored me to my uſual ſtate of good health. I entreat you to publiſh this for the public good, and ſhall be ever gratefully your's,

JOHN POWELL.

Clifton, near Briſtol.

To E. SIBLY, M.D.

SIR,

ACTUATED by a principle of gratitude, I cannot omit acquainting you of an extraordinary cure performed on me by means of your Solar Tincture.

I had

I had for ſome time been afflicted with the dyſentery, or bloody-flux, and was reduced to a very weak and languid ſtate, without deriving any benefit from the preſcriptions of the faculty. This induced me to make trial of your Solar Tincture; when, after taking only two ſmall bottles, I found myſelf perfectly recovered; therefore, by publiſhing this to the world, you will confer a favour on your grateful, &c.

WILLIAM JACKSON.

No. 8, Windmill-ſtreet, Tottenham-court-road.

DISEASES OF THE BREAST AND LUNGS, ASTHMA, DROPSY, OR CONSUMPTION.

TAKE one ſpoonful of the Tincture, night and morning, for twenty days ſucceſſively, diluted in two ſpoonfuls of cold ſpring-water; then reduce it to the ſame doſe every other day, which will in general remove the malady in the courſe of a month; but if the dropſy or conſumption has been far advanced, it will be neceſſary to continue the medicine for one, two, or even three months longer, reducing the number of doſes in proportion as health and ſtrength appear to return, and as the blood ſhall have reſumed its proper conſiſtency by a briſker circulation. In theſe complaints, it will not be amiſs to take the Tincture in a tumbler of warm water, as a beverage, for ſome time after the cure is perfected, as it will infallibly prevent the blood from returning to its watery and impoveriſhed ſtate, and will rarefy and expel the viſcid coheſions in the pulmonary veſſels. In theſe diſorders, the Solar Tincture may be ſafely adminiſtered to females even during obſtructions of the catamenia, as hath lately been experienced, by perfecting an admirable cure on a lady in Grafton-ſtreet, Fitzroy-ſquare.

This lady was afflicted with obſtructions of the liver and ſpleen, inſomuch that ſhe could not walk

up

up one pair of ſtairs, without much pain and ſhortneſs of breath. Her menſes were obſtructed; and twice or thrice a day ſhe was attacked with aſthmatic ſpaſms, accompanied with febrile ſymptoms. This affliction being of a peculiar nature, I was obliged to preſcribe both the Solar and Lunar Tinctures, in the following manner: Whenever the fever came on, ſhe took a doſe of the Solar Tincture; and, every morning and evening, ſixty drops of the Lunar Tincture, in a gill of mugwort-tea; in twenty-one days ſhe was perfectly recovered, and reſtored to her uſual colour and vivacity, to the great joy of her parents and friends.

MENTAL DEPRESSION, OR LOWNESS OF SPIRITS.

THIS may be conſidered the primary diſorder of the nervous train; and, if reſiſted in time, may in moſt caſes be eaſily cured. For this purpoſe take a table-ſpoonful of the Solar Tincture, diluted in a wine-glaſs of cold ſpring-water, every forenoon at eleven or twelve o'clock, for fourteen ſucceſſive days; then uſe it every two or three days for a month, and the complaint will be entirely removed, as all patients will ſenſibly feel, by their alertneſs, activity, and unuſual flow of natural ſpirits; of which the following caſe may ſerve as an example:

To E. SIBLY, M.D.

SIR,

FROM a full conviction of the efficacy of your Solar Tincture, I cheerfully come forward to inform you, that having been much afflicted with depreſſion of ſpirits, a nervous tremour, and palpitation of the heart (owing, I believe, to cloſe application to ſtudy, and much profeſſional duty) I have lately experienced a perfect cure, by taking one large bottle of your medicine. Impreſſed, therefore, with a ſenſe of gratitude to GOD and

you,

you, and having a certain knowledge of many other cures performed by your Tincture, I do hereby requeſt this may be made public, for the benefit of the afflicted, and am, with eſteem, &c.

W. WOOLLEY.

Borough, Southwark,
May 10, 1794.

BILE ON THE STOMACH.

ALL bilious complaints are removed by the Solar Tincture, in a moſt extraordinary manner. Whenever a fit appears to be coming on, with the ſtomach loaded and oppreſſed, one large table-ſpoonful, taken in the ſame quantity of warm water, will, in ten minutes, carry off the offending matter, cleanſe and comfort the digeſtive organs, and give the patient immediate relief.

BITE OF A MAD DOG, OR ANY VENOMOUS REPTILE.

THE fatal diſeaſe conſequent on the bite of a mad dog, is denominated hydrophobia, or *dread of water;* which circumſtance firſt ſuggeſted dipping in the ſea for the cure, by antipathy. It is very remarkable, that theſe patients have not only a dread of water, but of every thing bright or tranſparent. Soon after this affection takes place, the mind becomes impaired; which ſhews that the poiſon is carried through the blood to the nervous fluid, and thence to the brain. Dr. James, in his Treatiſe on Canine Madneſs, mentions a boy ſent out to fill two bottles with water, who was ſo terrified by the noiſe of the liquid running into them, that he fled into the houſe, crying out that he was bewitched. He mentions alſo the caſe of a farmer, who, going to draw ſome ale from a caſk, was terrified to ſuch a degree at its running into the veſſel, that he ran out in great haſte with the ſpigot. But, in whatever manner this ſymptom comes on,

on, it is certain that the moſt painful ſenſations accompany every attempt to ſwallow liquids. Nay, the bare ſight of water, of a looking-glaſs, or any thing clear or pellucid, will give the utmoſt uneaſineſs, and even throw the patient into convulſions. In this diſeaſe there ſeems to be an extreme ſenſibility and irritability of the nervous ſyſtem. The eyes cannot bear the light, or the ſight of any thing white; the leaſt touch or motion offends them, and they want to be kept as quiet and in as dark a place as poſſible. Some complain of the coldneſs of the air, frequently when it is really warm. Others complain of violent heat, and have a great deſire for cold air, which yet never fails to increaſe the ſymptoms. In all there is a great flow of the ſaliva in the mouth, which is exceedingly troubleſome to the patients, as it has the ſame effect upon their fauces that other liquids have. This, therefore, they perpetually blow off with violence, which in a patient of Dr. Fothergill's occaſioned a noiſe not unlike the hollow barking of a dog, and which he conjectures might have given riſe to the common notion that hydrophobious patients bark like dogs. They have an inſatiate thirſt; but are unable to get down any drink, except with the utmoſt difficulty; though ſometimes they can ſwallow bread ſoked in liquids, ſlices of oranges, or other fruits. There is a pain under the *ſcrobiculus cordis*, as in the tetanus; and the patients mournfully point to that place as the ſeat of the diſeaſe. Dr. Vaughan is of opinion that it is this pain, rather than any difficulty in ſwallowing, which diſtreſſes the patient on every attempt to drink. The voice is commonly plaintive and mournful; but Dr. Vaughan tells us there is a mixture of fierceneſs and timidity in the countenance which he cannot deſcribe, but by which he could know a hydrophobious perſon without aſking any queſtions. Some ſeem to have

at times a furious delirium, and an inclination to ſpit at or bite the bye-ſtanders; while others ſhew no ſuch inclination, but will even ſuffer people to wipe the inſide of their mouths with the corner of a handkerchief, in order to clear away the viſcid ſaliva, which is ready to ſuffocate them. In ſome male patients there is an involuntary erection of the penis, and emiſſion of the ſemen; and the urine is forced away by the frequent return of the ſpaſms.

In a letter from Dr. Wolf, of Warſaw, to Henry Baker, Eſq. F.R.S. dated Warſaw, September 26, 1767, we have the following melancholy account of the caſes of five perſons who died of the hydrophobia:---None of them quite loſt their ſenſes; but they were all talking without intermiſſion, praying, lamenting, deſpairing, curſing, ſighing, ſpitting a frothy ſaliva, ſhrieching, ſometimes belching, and retching, but rarely vomiting. Every member is convulſed by fits, but moſt violently from the navel up to the breaſt and œſophagus. The fit comes on every quarter of an hour; the fauces are not red, nor the tongue dry. The pulſe is not at all feveriſh; and when the fit is over nearly like a ſound pulſe. The face grows pale, then brown, and during the fit almoſt black; the lips livid; the head is drowſy; and the ears tingling; the urine limpid. At laſt they grow weary; the fits are leſs violent, and ceaſe towards the end; the pulſe becomes weak, intermittent, and not very quick; they ſweat, and at laſt the whole body becomes cold. They compoſe themſelves quietly, as if to get ſleep, and ſo they expire. A general obſervation was, that the lint and dreſſings of the wounds, even when dry, were always black, and that when the pus was very good in colour and appearance. In one of Dr. Wolf's patients who recovered, the blood ſtank intolerably as it was drawn from a vein; and one of Dr. Vaughan's patients

complained

complained of an intolerable fœtid ſmell proceeding from the wounded part, though nobody but himſelf could perceive it. In general, the violent convulſions ceaſe a ſhort time before death; and even the hydrophobia goes off, ſo that the patients can drink freely. But this does not always happen; for Dr. Vaughan mentions the caſe of a patient, in whom, "when he had in appearance ceaſed to breathe, the ſpaſmus cynicus was obſervable, with an odd convulſive motion in the muſcles of the face; and the ſtrange contrariety which took place in the action of theſe, produced the moſt horrid aſſemblage of features that can poſſibly be conceived. Of this patient alſo it was remarkable, that in the laſt hours of his life he ceaſed to call for drink, which had been his conſtant requeſt, but was repeatedly aſking for ſomething to eat."

The hydrophobia ſeems to be a ſymptom peculiar to the human race; for the mad animals which communicate the infection do not ſeem to have any dread of water. Notwithſtanding this, dipping is the common remedy for the cure of dogs and men. With regard to the ſymptoms of madneſs in dogs, they are very equivocal; and thoſe particularly enumerated by ſome authors, are only ſuch as might be expected in dogs much heated or agitated by being violently purſued and ſtruck. One ſymptom indeed, if it could be depended upon, would determine the matter; namely, that all other dogs avoid and run away from one that is mad; and even large dogs will not attack one of the ſmalleſt ſize who is infected with this diſeaſe. Upon this ſuppoſition they point out a method of diſcovering whether a dog that hath been killed was really mad or not; namely, by rubbing a piece of meat along the inſide of his mouth, and then offering it to a ſound dog. If the latter eats it, it is a ſign the dog was not mad; but if he rejects it, with a kind of howling noiſe, it is certain that he was.

Dr. James tells us, that among dogs the diſeaſe is infectious by ſtaying in the ſame place; and that after a kennel has been once infected, the dogs put into it will be for a conſiderable time afterwards in danger of going mad alſo. A remedy for this, he ſays, is to keep geeſe for ſome time in the kennel. He rejects, as falſe, the opinion that dogs when going mad will not bark; though he owns that there is a very conſiderable change in their bark, which becomes hoarſe and hollow.

With regard to the immediate cauſe among mankind, there is not the leaſt doubt that the hydrophobia is occaſioned by the ſaliva of the mad animal being mixed with the blood. It does not appear that this can operate through the cuticula; but, when that is rubbed off, the ſmalleſt quantity is ſufficient to communicate the diſeaſe, and a ſlight ſcratch with the teeth of a mad animal has been found as pernicious as a large wound. It is certain alſo, that the infection has been communicated by the bites of dogs, cats, wolves, foxes, weaſels, ſwine, and even cocks and hens, when in a ſtate of madneſs. But it does not appear that the diſtember is communicable from one hydrophobious perſon to another, by means of the bite, or any other way. It has been generally allowed by practitioners, that though the hydrophobia may be prevented, yet it ſeldom can be cured after it has made its appearance. The moſt eſſential part of the treatment, therefore, depends on an immediate uſe of the proper means of prevention. For this purpoſe ſome adviſe the inſtant cutting out the part bitten, which muſt certainly be an effectual mode, provided we could be ſure the poiſon had not reached beyond the wound. When, however, we conſider the rapidity with which the blood and juices flow, it ſeems impoſſible that ſuch an operation can be wholly depended on. I ſhould nevertheleſs adviſe it to be done, if the part bitten be much mangled; after which let it be well

ſoked

ſoked with the Solar Tincture; and, to fortify the blood, let the patient ſwallow a table-ſpoonful every three hours, *undiluted*, for the firſt day; and the ſame doſe night and morning for a month following; taking my Cleanſing Powders twice a week. Let the part be again ſoked with the Tincture, four times a day, for three or four days; and I am ſatisfied a ſafe and perfect cure may be relied on. For the bite of adders, ſnakes, &c. bathing the part, and taking the medicine *undiluted*, will counteract the virulence of the poiſon, and preſerve the patient from further injury.

CASE.

To E. SIBLY, M.D.

SIR,

THINKING it a duty due to you, to acknowledge benefits received through your means, and deſirous that ſociety ſhould partake of ſimilar benefits, I take the liberty to communicate the following circumſtance:

My brother, Benjamin, about eight years of age, was bit by a dog, in the leg; and from the condition of the animal, it was ſuppoſed to be mad. My parents, much alarmed and diſtreſſed, ſent my brother to Mr. Chamberlain, the druggiſt, who lives in the ſame ſtreet; he applied the Solar Tincture to the wound, repeatedly well bathing the part, and he has been quite well ever ſince. The dog that bit my brother, bit another boy in the hand immediately after: the parents of the boy applied to medical men, of the greateſt reputation in this town, who ordered ſea-bathing; but this was of no uſe to him, for he died in leſs than two months, raving mad.

I am happy to ſay, that although it is nearly two years ſince the accident happened to my brother, the

the ſlighteſt ſymptom of the hydrophobia has not appeared. In juſtice, therefore, to you, and for the benefit of ſociety at large, you may make what uſe you pleaſe of this letter; and any perſon applying to me, may be certified of the truth from my own hands. For the preſent, Sir, I ſubſcribe myſelf, your's, in perfect eſteem,

JAMES BUDD, Jun.

No. 14, Butcher-ſtreet, Portſea-town.
July 23, 1798.

FOR GUN-SHOT WOUNDS, CUTS, STABS, &c.

GENTLEMEN in the army and navy, and all perſons liable to gun-ſhots, ſtabs, wounds, &c. ſhould never be without the Solar Tincture. Its ſalutary effects on the blood, in all theſe caſes, are really ſurpriſing. It totally prevents, and will even ſtop, mortification, in very advanced ſtages. It quickly ſupplies the greateſt loſs of blood, fortifies the heart, cheriſhes the vital organs, and heals and unites the fleſh in an uncommon degree. If taken internally, and poured at the ſame time into the wound, it is quickly propelled through the heart, by the veins and arteries, and thus renovates the exhauſted ſpirits, and preſerves life. Its effects on a few ſimple wounds may be ſeen in the following caſes:

To E. SIBLY, M.D.

SIR,

FOR the ſake of thoſe who are liable to accidents, I think it right to inform you of a moſt remarkable cure performed by your Solar Tincture, on a very deep and dangerous wound made on Mrs. Cook, by a caſe-knife, of more than the depth of my fore-finger. After trying every means in vain to ſtop the blood, I ſent for a bottle of your Solar Tincture, and well bathed the wound therewith. The blood and Tincture readily

dily assimilated, and formed a crust on the orifice of the wound, which very soon stopped the effusion of blood. But what is most remarkable, the wound was completely healed in less than six days, and is now so perfectly closed, as to be almost imperceptible. You are welcome to publish this, and in so doing you will oblige, &c.

WM. COOK.

No. 1, Edward-street, Portman-square.

To E. SIBLY, M.D.

SIR,

In justice to my own feelings, I cannot but acquaint you with a cure performed by your Solar Tincture, in a very uncommon manner. As I was travelling, in the stage, to Boxley-abbey, near Maidstone, in Kent, a gentleman who sat next me, putting his head out of the window, received a violent cut across the eye, from the coachman's whip, which produced an immediate swelling and inflammation, attended with so much agony, that he declared the pain was insupportable. I had purchased a bottle of your Solar Tincture, while in town, knowing it had performed many surprising cures in my neighbourhood. This I immediately opened, and applied to the inflamed part; and after washing the eye well with it, I bound a white handkerchief tight over it, wetted with the Tincture. In less than ten minutes the anguish was greatly assuaged; and in the course of three hours it was quite well. The gentleman expressed the utmost astonishment at the celerity of the cure, as did every passenger in the coach. I wish this to be made as public as possible, for the benefit of those who are liable to accidents; and am, with respect, &c.

M. STABLES.

Kensington-place, Bath.

To

To E. SIBLY, M.D.

DEAR SIR,

BEING informed by a friend that you ſhortly intend to print a new edition of your Medical Mirror, Mrs. M. thinks it a duty ſhe owes to the efficacy of your invaluable Solar Tincture, to beg leave that her caſe may be made known through the medium of that publication; ſo that thoſe afflicted with ſimilar complaints may know what medicine to apply, and obtain relief. I make no doubt but you have already many caſes not leſs lamentable than her's; yet her earneſt ſolicitations, and the impulſe of the gratitude I feel on the recovery of ſo valuable a life, urges me to ſolicit this favour. Your compliance will confer an additional obligation on, Sir,

Your obedient humble ſervant,

WILLOUGHBY MARSDEN.

No. 13, Down-ſtreet, Piccadilly,
10th February, 1795.

CASE.

The origin of Mrs. Marſden's extraordinary caſe, proceeded from the injudicious treatment of a dignified phyſician *, who attended her for a *ſpurious pleuretic complaint.* This phyſician ordered phlebotomy to ſuch an extravagant degree, that in a few days there were taken from her *ten pounds of blood!* Added to this, a regimen of low diet was ordered, conſiſting of barley-water, panada, balm-tea, oranges, lemons, &c. without any licence to derive the leaſt ſuſtenance from meats, or any ſimilar nouriſhment. Nature being thus unſupported, and having already received ſo inhuman a ſhock by immoderate veneſection, her natural juices were ſo deſtroyed, that the abſorbent

* Sir R. J, Bart.

property

property relaxed its functions, the ſolids were impoveriſhed, and the whole nervous and organic ſyſtems forbore to perform their office; this naturally introduced a leucophlegmatia, or viſceral dropſy, attended by a weak and unequal pulſe, immoderate watching, a great laſſitude throughout the whole frame, accompanied with a copious diſcharge of the menſtrual flux, and a total imbecility of the whole ſeminal veſſels; icterus, or yellow jaundice, was now produced, certainly brought on by ſuch a profuſion of acids.

In this ſtate a number of other reſpectable gentlemen of the faculty were applied to, but in vain; for after they had gone through the common rotation of medicine, ſhe grew worſe, and it was reaſonably imagined the period of her exiſtence was near; but providentially, in this deplorable ſtate, ſhe was informed of the wonderful power of the Re-animating Solar Tincture in ſuch caſes; as the laſt reſort, therefore, it was thought proper to conſult me. I enquired into the various ſymptoms of her complicated maladies, and preſcribed a table-ſpoonful of the Solar Tincture every ſix hours, with an equal quantity of water; but after taking two bottles, this injured ſufferer finding ſhe received much more benefit when ſhe took the Tincture *undiluted*, ſhe determined to try the next bottle without any aqueous menſtruum whatſoever, and from this bottle received ſuch amazing benefit *, that ſhe reſolved in the future to make uſe of the Tincture intire; this ſhe continued to do, and by an external as well as by an internal application, ſhe was, after taking twelve large bottles, perfectly recovered, to the aſtoniſhment of her friends, and no ſmall joy of her family.

* In this case, *it was not the water* mixed with the Tincture that could afford her the least relief: she had too much of that menstruum already in her composition.

CASE.

Mr. CAREY, caulker, reſiding in Unicorn-ſtreet, Portſea, Hants, was afflicted by dreadful epileptic fits, which were always preceded by vertigo, a pallid countenance, a difficulty of reſpiration, and the abdomen tumid with flatulencies to an amazing degree; and when ſeized, violently agitated by trembling and foaming at the mouth, as well as a total deprivation of the ſenſitive faculties. Theſe fits returned upon the patient, at ſtated periods, every three or four months, for many years, and confined him to his room from three to ſeven weeks at a time. Upon aſking medical advice, all the hopes he could gain from the faculty was, *that his was a caſe beyond the help of medicine.* A friend, however, who went for the purpoſe of ſitting up with him during his extreme malady, one night as one of the fits had juſt ſeized upon him, having ſome of the Solar Tincture by him, reſolved to try its efficacy, and having given him two table-ſpoonfuls in the courſe of an hour, the epilepſy vaniſhed, nor has he been attacked with the leaſt ſymptom ſince the year 1793, though previouſly to that period he was never free from the moſt violent attacks of the diſorder.

CASE.

Mrs. STOCKMAN, Queen-ſtreet, Portſea, by want of prudent management during her lying-in, caught a violent cold, which ſettling upon her lungs, the viſcera was affected, and cauſed a total relaxation of all the ſeminal veſſels, which ſo much debilitated the whole frame, that the ſolids were in the moſt impoveriſhed ſtate; ſhe was advancing very faſt towards the laſt ſtage of a conſumption; medical aſſiſtance ſeemed to be baffled, and hope

was

was rendered vain; when by taking only three bottles of the Solar Tincture, she was perfectly recovered, and is now likely to be the happy mother of a numerous issue.

CASE.

Mr. BROWN, rope-maker, Charlotte-row, Portsea, was tormented by a violent cough, which unhappily terminated in an epyema, or consumption. He was so reduced and emaciated, that no hopes of his recovery were entertained, as he had been compelled to give over his employment for eight months. After resorting to all the common routine of medical assistance, the Solar Tincture was recommended to his consideration. He gave it a trial, and its wonderful effects soon proved how well he had acted; for by taking only one bottle, his stomach was braced, he expectorated freely, his countenance began to recover its wonted appearance, his fæces were regular, and the hectic fever left him; his respiration became easy, and his pulse regular; and to the utter astonishment of himself and his whole family, two more large bottles perfectly restored him to ease and comfort, and invigorated the whole system, so that he is now a living monument of the salutary effects of this admirable Tincture.

CASE.

A MARINER, belonging to the brig Hannah, Joseph Hopkins, master, bound to Maryland, in America, was troubled with an inflammation of the bowels, accompanied by a fever, and intense heat, thirst, and nausea. In this case one bottle of the Solar Tincture established a cure.

CASE.

Mrs. DUBOIS, a widow lady, at No. 5, Portland-street, Soho, of the age of eighty-five years,

in the month of January, 1794, was afflicted with a peripneumony of the lungs, attended with a pain between the ſcapulæ, a violent cough, a weight and diſtenſion of the præcordia, a loathing of food, an intermitting pulſe, a frothy, but ſometimes a yellow matter expectorated by coughing; and when ſhe lay on her ſide, in danger of being ſuffocated; her extremities cold, and the nails of the fingers became livid, with little or no ſleep. After making uſe of many medicines to no purpoſe, ſhe heard of the re-animating property of the Solar Tincture, and I was applied to for my aſſiſtance. Although her extreme age was ſuch, that little could be expected from common medicines, yet knowing the virtues of the Solar Tincture as the pabulum, or food, of life, I readily preſcribed half a table-ſpoonful, diluted with an equal quantity of water, to be given every three hours; but to be augmented the ſecond day to a table-ſpoonful. This produced the deſired effect, and brought on a profuſe expectoration, and diſpelled the uneaſineſs of her reſpiration; her urine was diſcharged more copiouſly, and with much ſediment; her fæces were moderately lax, her appetite conſequently returned, and I had the pleaſure to find, after ſhe had taken four bottles, that her vital heat increaſed, her ſpirits were invigorated, and the whole functions of her body reſtored to their uſual ſtrength.

She is now a living teſtimony of the aſtoniſhing powers of this ſingularly prolific medicine.

Auguſt 2, 1796.

CASE.

To E. SIBLY, M.D.

SIR,

TO continue ſilent, after the many extraordinary inſtances of ſucceſs I have witneſſed from your truly

truly valuable Solar Tincture, would be the extreme of ingratitude; a conduct I would earneſtly deſire to avoid.

In my own family, Sir, I have occaſionally uſed it for the laſt three years, and have derived infinite ſatisfaction from the ſucceſs attendant upon my recommendation of it to others. In fits, and bowel complaints (particularly incident to children) I have, on adminiſtering the Tincture, found almoſt inſtant relief; nor is it leſs efficacious in the hooping-cough. I was induced to uſe it for this truly diſagreeable malady, by your having, in your ſhort treatiſe, deſcribed it as being a cleanſer of the lungs, viſcera, &c.

This reminds me of a very ſingular inſtance of ſucceſs which occurred about two months ago: The child of one Thomas Deadman was ſorely attacked by a violent cold, which terminated in an inflammation on its lungs; an apothecary, of great reſpectability, attended it, and to my knowledge gave up all hopes of ſaving the child's life. In the aweful interval of extreme apprehenſion and ſlender hope, a tea-ſpoonful of Tincture, with as much water, was given her; this ſoon occaſioned the child to open its eyes, which ſhe had not done for two days preceding. Encouraged by this circumſtance, I earneſtly recommended a further ſupply, one tea-ſpoonful of Tincture to two of water, every two hours. In a very ſhort time the danger was over; the child now lives in apparent health and ſtrength. If the atteſtation of the parents will, in your opinion, tend to increaſe the knowledge of the Tincture's efficacy, they will moſt gratefully come forward, whenever you pleaſe.

As a ſtyptic, it is invaluable; and in violent bruiſes and contuſions, one trial only will be ſufficient. Having been in no one inſtance diſappointed, when properly adminiſtered, I already anticipate much pleaſure in trying its *re-animating*

powers

powers on animals, agreeably to your hints in the Treatiſe. With the moſt earneſt wiſhes for your ſucceſs, I am, Sir, &c.

T. BENNET.

N.B. A medical friend of mine, in Eſſex, writes me word, that he has uſed the Tincture with much ſucceſs in agues. As he has laid aſide his former prejudices againſt it (by candidly trying its powers) I hope and expect that he will be of great ſervice to the afflicted, by his recommendation.

East-ſtreet, Kennington,
June 20, 1798.

CASE.

A NOBLEMAN of very high rank, in this country, called in my aſſiſtance to the relief of his lady, who experienced the utmoſt degree of *laſſitude* and *frequent abortion.* She was attacked with pains of the ſtomach in the morning, which, deſcending to the lower extremities, haraſſed her with intenſe pain and extreme languor; ſhe was alſo troubled with flatulencies and depreſſion of ſpirit, till about mid-day, when her conſtitution, naturally pure, reſiſted the complaints, and relieved her till about nine or ten o'clock in the evening, when her ladyſhip's malady returned with redoubled wearineſs; the water appeared pale, with a ſediment; ſhe was attacked by nervous head-aches, and violent ſpaſms relaxed her whole frame; the fluor albus made an alarming appearance; her fleſh loſt its firmneſs; and although only in the TWENTY-FIRST year of her life, ſhe unhappily experienced the ſenſation of *the infirmities of premature age;* her ſleep approached torpidity, except interrupted ſometimes by dreams; and although her appetite appeared regular, ſhe had every ſymptom of hypochondriacal dejection. Theſe alarming indications of decay ſo agitated his lordſhip's feelings, that the

regular

regular practice, as well as a profuſion of *glutinous noſtrums* had been tried for upwards of a year, and had obſtructed the capillary veſſels without any viſible relief; he applied to me, and earneſtly deſired my advice. Conceiving the lady's ſituation, though to appearance deſperate, not beyond the reach of the *invigorating* power peculiar to the *re-animating* SOLAR TINCTURE, I preſcribed the medicine to her ladyſhip; the firſt application of which produced the moſt extraordinary change for the better, and ultimately re-eſtabliſhed her ladyſhip in all the bleſſings of good health and a confirmed temperature of body. It may not be unneceſſary to add, that ſhe has ſince cheered this noble houſe with a ſon and heir. To evince his lordſhip's good opinion of the properties of this *invaluable Tincture*, I ſhall beg to ſubjoin a copy of one of his lordſhip's laſt letters, as follows:

To Dr. SIBLY.

SIR,

INCLOSED is a draft for the amount of two dozen of Solar Tincture bottles, that you ſent to Lady ----------.

She deſires that you will immediately ſend to her one dozen more; and that you would give particular orders that it may not be left at the coach-office, neglected, as one of the boxes were before.

She continues to go on well in her pregnancy, and is much better in health in general. She ſeldom has the head-ache now, and does not feel ſo cold as ſhe uſed to do in a morning. Ever ſince ſhe has taken ſome magneſia at night, the griping pains do not come on.

She takes your medicine regularly, in a morning early, or in the night, if ſhe does not ſleep well, which, in that laſt caſe, immediately brings on

ſleep.

ſleep. She does not take any in the day-time, except ſhe has a head-ache, or a pain in her back, and then it generally relieves her ſoon.

I am, Sir,
Your humble ſervant,

----------, ----------.

April 3, 1795.

CASE.

SIR,

WITH heartfelt ſatisfaction I communicate to you the great benefit I have received from your invaluable Solar Tincture. It is about fourteen years ſince I was attacked with a violent head-ache, which increaſed upon me, notwithſtanding the united efforts of ſeveral of the faculty. After various trials of medicines, and two years' ſuffering, a phyſician, eminent, and of great practice, recommended a perpetual bliſter on my back. This, Sir, threw the diſorder from my head upon the ſyſtem of the nerves, which lay near the heart; obſtructions took place, which nothing I could take could remove, which brought on reſtleſs nights, attended with frightful dreams, and an univerſal relaxation of the nervous ſyſtem, lowneſs of ſpirits returned frequently upon me, and ſunk me to the very centre of the earth; I could at times feel every cold cloud that paſſed over me. Every ſpring, when the north and north-eaſt winds were moſt prevalant, I was ſure to catch a violent cold, which would confine me for ſome months; at which time the abdomen would ſwell exceſſively with a pent-up wind, which nothing I could take could diſcharge. Spaſms in every part of the body were at this time prevalent, and very diſtreſſing. In due time, after much ſuffering by the uſe of medicines, it paſſed through me, and fell into my legs, bringing on the dropſy, which, with difficulty, I was enabled to repreſs; a languor

of

of ſpirits, debilitated ſtate of body, weakneſs in the loins, and the rheumatiſm in my head, afflicted me many years. At length, a gentleman of the faculty, in the country, whom I venerate and eſteem, wrote me to ſend him a quantity of your Solar Tincture; againſt which I confeſs myſelf to have been greatly prejudiced, having ſo often been deceived by advertiſed medicines, even to my injury. In continuing my correſpondence, I determined in myſelf to give it a trial, and am exceedingly happy that I have ſo done; for notwithſtanding my diſcouragement in the beginning, I determined to perſevere. On taking the two firſt bottles, I found my complaint exceedingly acute, the pain on the ſyſtem of the nerves in the ſtomach increaſed, hyſterics, and convulſions; in fact it is out of my power at preſent to convey an idea of the pain I ſuffered. Night and day I was on a continual rack; the third bottle removed it into my lungs. Phlegm in this ſtate overwhelmed me, and a ſhortneſs of breath, nearly, at times, to ſuffocation. I perſevered in the uſe, which removed it again into the brain. I now found great eaſe, and remarked, that wherever my complaint removed, the effect of the Tincture was viſible in a particular warmth at that part. In ſome ſtages of my diſorder, I have been awakened from my ſleep with an uncommon cold fit; at which time it hath appeared as if all my veins were full of ice. I am happy to inform you, that all theſe complaints, with many others, not enumerated, are removed by your very excellent Tincture. I now feel a ſtrength and freedom in my ſtomach, which I have been a ſtranger to for twenty years; and although in my ſixty-fourth year, my ſtrength is as great as it was at forty.

You are at liberty to make uſe of this information in what way you pleaſe. I ſhall always be ready to anſwer every enquirer whom you may

pleaſe to ſend, and I hope to their ſatisfaction. For myſelf, I muſt declare, I have found more real benefit from your Solar Tincture than from all the things I have ever taken.

I am, Sir, reſpectfully,
Your's, &c.
H. J. GOLDRING.

No. 2, Chequer-alley, Bunhill-row, Moorfields,
Aug. 4, 1796.

CASE.

SIR,

AS an admirer of the improvements of medical philoſophy, I am induced to ſend you the following caſe, as a ſingular proof of the efficacy of your Re-animating Solar Tincture, in contuſions:---Being alarmed by the ſhrieks of a child, in the ſtreet, I enquired the cauſe, and found that his fingers were bruiſed by the ſudden jamming of the ſtreet-door, ſo violently, that they appeared one preſſed pulp, with the blood forced out of every pore. I immediately applied the Tincture (as I keep it by me, being ſubject, at times, for ſome years, to internal piles*, and violent hæmorrhage, from a coſtive habit of body) and had the pleaſure to find the excruciating pain inſtantly to abate, and inſtead of being black, reſume their natural colour; and, after a few applications, his fingers were perfectly recovered. I muſt beg leave to make a few obſervations on the virtue of the Tincture, from its ſimilar effects to vital air, in reſtoring ſuſpended animation, and renovating the vital principle, in a languid ſtate by diſeaſe, accidents, &c. The new diſcoveries in pneumatical chemiſtry have opened a field of knowledge which promiſes great improvements in the medical art, and accounts for many curious and uſeful

* See page 135.

phenomena

phenomena in nature, which were before unknown. I could not but admire the effects of the Solar Tincture, in the above case, in preventing the bruised fingers turning black, as is the case in all bruises, and in every case were the circulation is prevented by suffocation, fits, &c.; the lips, nails, and blood, turning black for want of a supply of oxygene, or vital air*: the pain ceasing on the application of the Tincture, may be from similar effects, as by experiment we find that when the skin is removed by blisters, the common atmospheric air, being in contact, gives pain; but if the part is immersed in factitious air, the pain instantly ceases. From the repeated trials of your Tincture, in different cases, I find its renovating efficacy extended to admiration; and am, Sir, with respect, your's, &c.

W. JACKSON,
Professor of Medical Electricity.
No. 47, Upper Rathbone-place.

I SHALL only remark further, with respect to wounds, bruises, &c. that a short time ago, as a coach was driving furiously out of Cavendish-square, the horses unfortunately beat down a girl of eight years of age, the daughter of Mr. and Mrs. Larken, of Clipston-street, Fitzroy-square; and the wheels passing over her body, she was taken up to all appearance dead. The spectators were for carrying her immediately to the hospital; but the accident happening very near my house, I was sent for. I avoided letting blood, but bathed the bruised parts thoroughly with the Solar Tincture, and introduced half a spoonful, *undiluted*, into her stomach. It was now about nine o'clock at night. She was composed and asleep before ten, her present agony being subdued by the power of the medicine. A spoonful more of the

* See the Plate of the Heart, coloured.

Tincture was given her at different periods of the night, the ſudorific efficacy of which brought on a plentiful perſpiration. At ten o'clock the next morning ſhe awoke, and got up, and was ſo well recovered as to be able to play about with her companions, in all reſpects the ſame as if nothing had happened. The girl and her parents are pleaſed with every opportunity of recounting the circumſtances of this event to any enquirers.

CASE.

To E. SIBLY, M.D.

SIR,

I SHOULD think it unpardonable in neglecting to inform you of the wonderful effect your *Re-animating Solar Tincture*, this laſt week, has had on a child not two years of age, troubled with convulſions from its birth, which had contracted the muſcles of its arms and hands, and impaired its ſenſes, ſo that it appeared a poor diſtorted idiot.

The infant, in this condition, was carried by its mother to many medical gentlemen, and, with the reſt, to Mr. Barnard, of Southampton, who for ſeveral months tried a variety of means, without ſucceſs. In this ſtate it was brought to me; and after making uſe of many medicines (according to what is termed regular practice) like the reſt of the faculty, met with nothing but diſappointment, and while deſpairing of giving it any relief, bethought myſelf of the virtue and efficacy of your *Solar Tincture*, in many caſes for which I had preſcribed it. This recollection made me determine to make uſe of it, in this inſtance, and, to my aſtoniſhment, it exceeded my moſt ſanguine expectations; for the child had not taken more than one large bottle, in a doſe of two tea-ſpoonfuls, three times a day, or as often as the fit appeared approaching, but it perfectly recovered, with the uſe of its ſenſes, hands,

and

and arms, to the no small pleasure of myself, the mother's joy, and to the credit of your *Solar Tincture.* I am, Sir, respectfully your's,

JOSEPH CHAMBERLAIN,
Butcher-street, Portsea, Hants, Chemist and Druggist.
18th May, 1798.

To E. SIBLY, M.D.

SIR,

SUCH is the extraordinary demand for your Solar Tincture, that I wish to have sent me a fresh supply, by the first conveyance. Every week produces some fresh instance of its remarkable efficacy, in addition to that case sent you, a few days back, of an infant cured of convulsions, often so fatal to children. We have had two cases of agues; they were both very obstinate, having baffled every other remedy, but by taking one large dose of your Solar Tincture, they were quickly overcome; indeed the effect was so sudden on both of them, that it was astonishing, and I am inclined to believe, in such complaints, it is the greatest specific in the known world.

I am, &c.

J. CHAMBERLAIN,
Butcher-street, Portsea, Chemist and Druggist.
May 29, 1798.

THESE are only a few of the many thousand distressful cases which have been totally removed by means of the salutary interposition of the REANIMATING SOLAR TINCTURE, OR PABULUM* OF LIFE: and being desirous that every one afflicted may judge somewhat of their own complaint, I have added the following few remarks.

* Or Food.

OBSERVATIONS

OBSERVATIONS

HOW TO DISTINGUISH ONE DISEASE FROM ANOTHER.

IT is a well-known fact that many a valuable life has been loſt by a miſtaken judgment; as ſuch it renders it neceſſary the afflicted ſhould be acquainted with a certain knowledge of their own complaint, eſpecially as ſo many diſeaſes are ſo nearly allied to each other: among this claſs is the

HÆMOPTYSIS, or ſpitting of blood; or HÆMORRHAGE, or flux of blood from the lungs. This ſhould be carefully diſtinguiſhed from bloody ſpittle which proceeds from the œſophagus, fauces, and noſtrils, and is rather brought up by hawking than by coughing; beſides, it is not ſo copious, it is mixed with phlegm, and is of an obſcure bloody colour. Likewiſe, a true hæmoptyſis may be known from that of ſpitting of blood, which proceeds in a ſmaller quantity, from a diſorder of the veſſels of the *aſpera arteria*, and is brought up with coughing, and is commonly attended with itching, and a ſalt taſte. An hæmoptyſis differs greatly from vomiting of blood, becauſe in the former the blood is thin, very florid, arterial, and not brought up without labour and ſtraining; whereas in vomiting of blood, it is brought up without coughing; it is thick, coagulated, and black, and chiefly proceeds from the veins. Neither is vomiting of blood of one ſingle ſpecies: one kind proceeds from a corroding cauſtic contained in the ſtomach, as in poiſons, and violent emetics; another ſort proceeds from an impetuous motion of the blood, brought from other parts of the veſſels of the ſtomach, which are

eaſily

eaſily burſt, as is the caſe from the ſuppreſſion of the uſual ſanguineous evacuations; this kind of vomiting generally obſerves ſome ſtated periods.

In the kinds of *bloody urine*, one proceeds from a rough ſtone lacerating the urethra, or its veſſels, which is not very common even to nephritic perſons, and then a ſmall quantity of blood is voided. But if it is attended with a violent impetus of the blood, and flows violently to the kidneys, from other parts, it is generally without mixture, and without any particular complaint or ſenſation; and when it ſeparates from the urine, is not red, but of a browniſh yellow colour. A diſorder not unlike this attacks perſons advanced in years, who are full of blood and humours, but often without any danger.

The flux of blood which ſometimes happens to pregnant women, without any danger to health, ought to be diſtinguiſhed from that which threatens abortion. If it only happens periodically, for three or four months, then it is ſalutary; but if the flux be large, and proceeds from the veſſels of the uterus, it is dangerous both to the mother and fœtus. If the flux is violent, it ſhews a total ſeparation of the ſecundines, and that abortion will follow; if it be moderate, the fœtus may be ſaved. If this flux correſponds with the period of the catamenia, and the os uteri is cloſed and without pain, the flux does not proceed from thence.

Moreover, a flux of the piles, or hæmorrhoides, is to be well diſtinguiſhed from a dyſentery, ſince they both agree in this, that in both diſorders the blood is mixed with the excrements. In the piles, the blood flows without any pain, or ſpaſms, and is ſometimes critical and healthy; on the contrary, a dyſentery is attended with the moſt violent ſpaſms, and painful gripes, and the whole body is in high diſorder, eſpecially if the ſmall inteſtines are affected; for then, on the firſt days, there are

vomiting,

vomiting, hiccuping, anxieties of the præcordia, loſs of appetite, and great weakneſs. The white dyſentery differs little in its nature from the red: in the white, little blood comes away; but in the red, the blood is more copious, with ſmall pieces of films, or fleſhy fibres.

We now come to pains, of which thoſe of the head are moſt common. If the head-ache is cauſed by a more impetuous congeſtion of blood in the head, with heat, redneſs, and ſwelling of the face, and a great pulſation of the arteries of the neck and temples; the pain and heat ſometimes extends as far as the bulbs of the eyes, with coldneſs of the extremities. If the head-ache is inveterate, and the offspring of venereal contagion, it is generally more violent in the night, is fixed to a certain part, and the ſkin is often raiſed by a kind of ſwelling. Beſides, the cauſe of a pain in the head often lies in the external parts of the ſkull and pericranium; for if it is in the membranes of the brain, it is attended with a vertigo, redneſs of the eyes, a ſtupour, oblivion, difficulty of hearing, and even a palſy or an apoplexy precedes or follows it.

Another cauſe of the head-ache is an infuſion of ſerum and blood from the veſſels into the ſinuoſities of the bones of the forehead; in this caſe the pain is obſtinate, ſharp, fixed, and ſituated in the bottom of the forehead, and above the eyes, never ceaſing night or day. Sometimes the head is diſordered from crudities in the ſtomach, which appear from belching, inflammations, and ſpaſms of the primæ viæ, and the pain is increaſed by flatulent food, but is leſſened by vomiting and evacuating ſtomachics. Another cauſe of a head-ache, but leſs known, is the extravaſated lympha in the ventricles of the brain, where it ſtagnates, and is not carried off by the infundibulum, or pituitary gland; in which caſe the inward parts of the head are continually in pain, which cannot

more

more certainly be eaſed than by abſtaining from drink, and taking the Solar Tincture, which evacuates ſerum, and my Cleanſing Powders, in cachectic and cacochymic diſorders.

The cardialgia exceeds all other pains for ſharpneſs. It is a ſpaſmodic pain in the orifice of the ſtomach. Sometimes the cauſe of it is in the ſtomach, and is a ſharp cauſtic matter, as in caſe of a poiſon; in the bilious paſſion, or dyſentery, it proceeds from a very ſharp cauſtic bile. Another cardialgia proceeds from a ſuppreſſion of the uſual ſanguineous evacuations, which regurgitate to the nervous membranes of the ſtomach. The cure conſiſts in taking one of the Powders night and morning; but when it proceeds from a ſharp cauſtic matter, the pain muſt be appeaſed by the uſe of the Solar Tincture, aſſes' milk, or cream, as well as the Powders. A cardialgia ſhould be well diſtinguiſhed from a painful inflammation of the ſtomach, when it is wonderfully diſtended with wind. In this diſorder the pain is under the ſpurious ribs, chiefly on the left ſide, and under the pit of the ſtomach, towards the right; the tumour is like a bladder diſtended with wind, and is not uncommon; it brings on a great difficulty of breathing, with anxiety; it is greater the more the diaphragm is thruſt upwards by the diſtended ſtomach, and hinders the expanſion of the lungs. This diſorder is moſt common to ſucking infants, when the milk ſtagnates in the ſtomach, and being coagulated and corrupted, is rarefied into wind. It is pretty common to hypochondriacal perſons, eſpecially if they eat too freely; for by indigeſtion a great deal of wind is generated.

It is likewiſe neceſſary to diſtinguiſh the pain of the cholic from that of a ſtone deſcending by the ureters; for in the ſtone of the kidneys there is a deep preſſing pain, which ſeems to be fixed in the loins, attended with a little ſhivering; it likewiſe

is attended with vomiting, and pains in the belly, when the ſtone is paſſing downward through the urinary paſſages; then the pain extends to the region of the *os iſchium*, and brings on a ſtupour of the thigh of the affected ſide; there are likewiſe frequent inclinations to make water, which is attended with a ſtrangury, and gravel often comes away. But the pain of the cholic is otherwiſe, for then the pain and gripes are more about the navel, ſhifting from place to place, and the belly is often diſtended with wind. But it often happens that the cholic is nephritic, which may be known from grievous pains in the belly, coſtiveneſs, vomiting, head-ache, coldneſs of the extremities, a ſtimulus to make water, till, the fit being ended, gravel comes away. The cholic which torments hypochondriacs lies in the hypochondria, and the left ſide is apt to ſwell, from wind in the flexures of the colon, and this pain returns oftener than the cholic.

If wind is the cauſe of the pain in the inteſtines, then there is a great inflation of the abdomen, which is ſometimes ſo great that there is a wind-rupture in the region of the navel. When perſons are ſubject to this diſeaſe, it proceeds from a refrigeration of the abdomen, or the feet, or from feculent drink, or flatulent food, eſpecially if cold liquor be drunk after it. As many perſons who are troubled with the gravel are liable to a flatulent cholic, the nephritic cholic is often confounded with it.

But if the pain of the inteſtines is attended with flatulencies, great anxiety, and a tenſive pain of the back, with coſtiveneſs which returns upon the ſlighteſt occaſion, and the face is cachectic, then the cauſe of the diſorder generally lies in the viſcera of the abdomen, through which the blood does not circulate regularly and freely, but ſtagnates in the volume of the inteſtines, and finding no exit through the hæmorrhoidal veſſels, it continues between the membranes of the inteſtines, diſtending

diſtending and tearing them; whence proceeds the cholic, which is called convulſive, becauſe the nervous ſyſtem is grievouſly afflicted thereby. This ſtagnation of the blood, if it proceeds from a ſuppreſſion of the hæmorrhoids, produces a violent pain in the inteſtines, which is ſaid to be hæmorrhoidal; and if it proceeds from an irregularity of the menſes in women, the blood returns back to the volume of the inteſtines, and produces gripes, which are called an hyſteric cholic. Another kind of cholic is the *bilious*, and is common to men of choleric conſtitutions, prone to anger, and of great ſenſibility. This is generally attended with vomiting, the head-ache, or a diarrhœa, and becauſe the free deſcent of the bile to the inteſtines is hindered by a ſpaſmodic conſtriction, it regurgitates to the habit of the body, and produces a yellow colour in the face.

It is likewiſe neceſſary to diſtinguiſh a convulſive cholic from the other kinds; for it diſturbs the nervous and membranous parts of the whole body, by conſent, in a terrible manner, inſomuch that a violent ſpaſm is ſpread through the whole ſyſtem of nerves, and then not only the ſtomach and inteſtines are drawn upwards and downwards, with obſtinate coſtiveneſs, but the muſcles of the belly and navel are drawn inward. If the nerves of the lungs are affected by the violence of the ſpaſm, the breathing is very ſhort and difficult, with a ſtrong motion of the thorax. When the diſorder increaſes, the membranes of the brain and nerves are affected, whence a vertigo, ſcotomia, ſlight delirium, watching, and a great coldneſs of the extreme parts, with a moſt violent agitation of the feet and arms, which often ends in a palſy of thoſe parts.

Workers in metals are greatly ſubject to this diſeaſe, eſpecially thoſe that are concerned in melting lead, and draw the ſteams in with their

breath. Likewiſe the ſcorbutic and cachectic are liable to this diſeaſe, as well as thoſe in whom the hæmorrhoidal flux is ſuppreſſed, or irregular, or who have had an ague imprudently cured with aſtringents. Sometimes it proceeds from worms, or from a ſtone in the bilious ducts. Hence we ſee the complaint is not eaſily corrected, or evacuated, as in the flatulent and bilious cholic, but is in the nervous and membranaceous parts, which eaſily produce theſe ſpaſtic motions. Likewiſe the cardialgia, and convulſive pain of the inteſtines, in very ſenſible bodies, proceeds from ſtrong affections of the mind, terror, frequent anger, ſpirituous liquors, and the like.

There are great miſtakes committed with regard to the gout and rheumatiſm. The pain in both is ſpaſtic, and infeſts the membranaceous parts with redneſs, heat, pain, ſwelling, and loſs of motion; but the arthritic pain proceeds from a ſharp tartareous ſerum in the joints, and the rheumatiſm is derived from a ſerous ſalino-cauſtic matter, ſituated externally in the membranes of the muſcles and ligaments of the joints. In the gout, the mucous glans of the joints and the glandulous ligaments contain the arthritic matter; on the contrary, the ſtagnant acrid ſerum of the rheumatiſm too plentifully congeſted in the veſſels from the blood, is collected between the interſtices of the membranes and muſcles. Whence the reaſon appears why the cure of the rheumatiſm is more eaſy than that of the gout, and why topics, or the bare external uſe of the Solar Tincture, will remove the pains of the former, but muſt be taken internally, as well as uſed externally, in the latter.

The gout muſt likewiſe be diſtinguiſhed from venereal pains; for the gout is more violent in the day, the lues venerea in the night; the gout has alſo a febrile motion, the other not. The gout has likewiſe ſtated times, and is exaſperated by

ſharp

ſharp medicines, mercurials, and the like; whereas the French diſeaſe is mitigated by theſe. There is likewiſe a peculiar difference between pains of the joints, of the legs, or feet, with tenſion, ſtiffneſs, imbecility of moving, and raging epidemically, and true arthritic pains. At ſome times, and in ſome conſtitutions of the air, we frequently hear of pains in the legs, of which ſome are tenſive, others obtuſe and dull; others pungent, lying among the bones of the tarſus and metatarſus, with immobility, ſtupour, and rigidity of theſe parts; which pain is increaſed by motion. Thoſe are ſubject to it who are bled in the foot, and expoſe themſelves to a cold air, after which comes on weakneſs of the affected member, and the pain, which continues for ſome months, and is miſtaken for the gout; but there is no fever, ſwelling, redneſs, nor heat, neither in the joints, nor in the perioſtium; therefore cannot be called the gout.

Let us now proceed to convulſive and ſpaſmodic diſorders, called *coughs*. Of theſe there are ſeveral kinds; if the cauſe of the cough is in the lungs, there is a difficulty of breathing, which is increaſed upon motion, or agitation of the body or blood; likewiſe there is often a ſhrill voice, a preſſing pain in the breaſt, and a hoarſeneſs. If it be dry, and continue long, there are generally hard tubercles, or vomicæ, full of matter; and the cough is conſumptive. But if it be moiſt, and great plenty of viſcid matter be brought up, it is a ſign there is a collection of matter in the cavity of the lungs; in this diſorder there is a difficulty of lying on the affected ſide, and pure matter, or mixed with blood, is brought up, which leaves no room to doubt that the lungs are affected.

Tuſſis ſtomachalis, or a ſtomach cough, is ſometimes moiſt, and ſometimes dry. If moiſt, a thick

thick and copious ſpittle is brought up after meals, generally with vomiting, the cough is more violent after pectorals and ſweet things, and is moſt troubleſome in the morning. There are likewiſe ſpaſmodic and flatulent diſorders in the abdomen, neither do the excretions by ſtool continue regular. In a convulſive, or hooping cough, that is violent and dry, the cauſe is chiefly in the nervous coats of the ſtomach, and there is a violent concuſſion of the whole thorax, with a deep ſound; this is greatly increaſed after cold drink, or acids. In this obſtinate cough, the hypochondria generally are diſordered, or there is a ſcorbutic and ſalt diatheſis mixed with the blood; wherefore this cough is not unfrequently attended with a miliary fever. If the matter lurk in the duodenum, which is often the caſe in intermitting fevers, eſpecially tertians, as alſo in hypochondriac patients, then acrid eructations and flatulencies are preſent, eſpecially in the paroxyſm after ſhivering, and cauſes a bilious and acid vomiting. Children are frequently troubled with hooping-coughs, partly becauſe the ſyſtem of their nerves is very prone to ſpaſtic convulſions, partly becauſe acid and bilious crudities are commonly ſeated in the ſtomach and duodenum. Children frequently vomit after the cough, but ſometimes it is quite dry, and one would think that they were in danger of being ſtrangled.

The aſthma is a common diſeaſe, and has various cauſes, which are variouſly ſeated, which makes divers kinds of this diſeaſe. The common cauſe is in the ſtomach, and then it is a flatulent aſthma; for the ſtomach being inflated, hinders the free deſcent of the diaphragm. This is common to the hypochondriac, who have a weakneſs of the ſtomach from flatulent food, which is mitigated by vomiting. A convulſive aſthma is greatly

greatly different from that which is humoural or ſanguineous; for it is periodical, and comes on at certain intervals, chiefly in the night; the breathing is ſometimes ſo difficult, that the patient cannot lie down without danger of ſuffocation. There is often a cold ſweat, which continues for twenty hours, and more, and brings on a fainting. There is generally perceived a conſtrictive compreſſion of the thorax, which is often extended to the neck. In this diſeaſe, a diſorder of the viſcera of the abdomen is generally preſent; eſpecially of the liver, whence a cachexy ariſes. But if the aſthma proceeds from a polypous concretion of the veſſels of the heart, then there is a palpitation of the heart. Laſtly, which is commonly the caſe, the cauſe of the convulſive and ſuffocating aſthma is a great extravaſation of water in the cavity of the thorax; out of the paroxyſm there is a fixed pain in the ſide of the thorax, where the water is contained, and the foot of the ſame ſide is apt to ſwell, or both; and the paroxyſm is long and violent, with great anxiety, but without a cough, and is often fatal.

The difference is not leſs between a convulſive aſthma, and a ſuffocating catarrh; for this is a kind of palſy affecting the nerves which ſerve for reſpiration, and comes on unawares, with great anxiety and wheezing; the face is ſwelled, and looks red, and ſuffocation is at hand. But a convulſive aſthma is a more periodical and chronical diſeaſe, and a ſuffocating catarrh is more properly reckoned an acute diſeaſe. In this there is perceived a conſtant afflux of matter, which is wanting in the aſthma; likewiſe a great loſs of ſtrength more commonly attends a ſuffocating catarrh, than a convulſive aſthma. A ſuffocating catarrh is moſt common to infants, to the weak, and to very old perſons; eſpecially when the exanthemata are driven back, ſuch as the ſmall-pox, meaſles, tinea

tinea capitis, achodes of the face, the itch, and the like.

We come now to the *apoplexy*, which is like a ſyncope, for there is in both a loſs of all the ſenſes, and yet there is a remarkable difference; for in this the pulſe and breathing are not perceptible, the face is pale, and the body is cold; but in the apoplexy the breathing continues, the face is often red and florid, and the pulſe ſtill beats. But the difficulty is greater to diſtinguiſh the ſpurious from the true apoplexy. The ſpurious is frequently an hyſterical ſymptom, and proceeds from the violence of the ſpaſms in the abdomen, in which the blood is redundant from the ſtagnation of the menſes; which being carried to the brain with force, ſtops in its veſſels, and intercepts all ſenſe and motion, except the pulſe and breath. It is commonly taken for a ſyncope, or hyſteric epilepſy, but not rightly, it is ſeldom fatal, for when the ſtricture is relaxed, or the patient is let blood, it eaſily abates. A true apoplexy is more dangerous, which from the burſting of the blood or ſerum from the veſſels, is often fatal; likewiſe a complete apoplexy is to be diſtinguiſhed from the partial, for the former proceeds from the burſting of the veſſels of the brain, the latter from their too great diſtention and ſtagnation of the blood therein, which frequently induces a palſy, and a debility of the ſenſes, but does not kill.

The *palſy* is likewiſe to be diſtinguiſhed into the true and falſe; the former has its ſeat in the brain, or the beginning of the ſpinal marrow, and takes away almoſt all ſenſe and motion. But the ſpurious is milder, and has not taken ſo deep a root in the brain, but in ſome certain nerves belonging to particular parts, and only hurts the ſenſes and motion. This is generally derived from the cholic, and the more grievous cardialgic and ſpaſmodic affections, eſpecially if there is a ſtagnation of the blood in the plethoric, and the blood is tranſ-

ferred

ferred to the nerves and muſcles which move the the hands and feet, and depoſits a viſcid ſerum; which lodging on the nervous membranes, induces an impotence of motion, the ſenſe of feeling being yet unhurt.

An *epilepſy* muſt be diſtinguiſhed from convulſions. For in the former the membranes of the brain are affected, in the latter the membranes and nerves of the ſpinal marrow are more concerned; nor are the thumbs ſo greatly contracted, though the limbs are very forcibly convulſed. Convulſive motions likewiſe greatly affect boys about fourteen years old, from violent anger, ſudden terror, refrigeration of the body, or worms; and there is ſuch a ſtrange diſtortion and ſhaking of the limbs, that they are commonly attributed to witchcraft. The mind, in ſome, is likewiſe diſturbed with various fantaſms, if it is not opportunely and readily cured; and will ſometimes come on twenty times a day, or oftener. The epilepſy is connected to ſome ſtated phaſes of the moon, and is not ſo frequent, generally ceaſing about the time of puberty. Laſtly, a catalepſy differs from an apoplexy, becauſe the former comes on ſuddenly, and keeps the members quite ſtiff, and in the ſame poſture as at the time of acceſſion. In both there is an abolition of all the ſenſes, with a ſtupour and ſleep. In all theſe complaints, the Solar Tincture is highly ſerviceable, and calculated to remove, as it ſtrikes at the root of diſeaſes, not barely at the branches.

ON THE DIAGNOSTIC OF URINE.

THE urine is a ſerous and ſaline fluid, of a citron colour, ſeparated from the blood, which the emulgent arteries carry to the kidneys; from whence it deſcends to the bladder, by the ureters, and is emitted, from time to time, by the canal of the urethra.

The urine is therefore the ſerofity of the blood, but not pure, for it is loaded with ſaline, ſulphureous, and terreſtrial particles, of which it is the menſtruum and the vehicle.

The urine of four-footed beaſts is troubled and muddy, that of men is more clear and limpid; in infants it is more pale and thick than that of middle-aged perſons. In the very old it is more clear, thin, and has not ſo much colour; in hot bilious conſtitutions, it is more of a ſaffron-colour; in the cold and pituitous, pale; wine-drinkers have it of a higher colour, and more thick; in thoſe that uſe much exerciſe, it is little and red; in the ſedentary, it is pale, with a large ſediment. After meals it is copious, inſipid, light, raw, and without ſmell; after long faſting it is of a higher colour, acrid, and little. Thoſe that ſweat much, make little water, which is more muddy and yellow.

The ſides of the bladder are guarded by a mucilaginous fluid, excreted by the glans which are between its coats; by which means the urinous ſalts make the leſs impreſſion upon it. This fluid forms the glair, which falls to the bottom of the veſſel, when a perſon is afflicted with the ſtone.

It is obſervable, that there are three ſorts of ſubſtances, differently placed: the *nubecula*, the *enæorema*, and the *hypoſtaſis*. The nubecula is a ſort of pellicle, which ſwims on the top of the urine, and conſiſts of the ſaline and fibrous particles of the blood, mixed with the ſerofity. When it is expoſed to the fire, it changes to a cruſtaceous ſubſtance. The enæorema, or ſuſpenſion, is a white, light, ſpongious matter, which ſwims in the middle of the urine, conſiſting of particles of a different nature. The hypoſtaſis, or ſediment, is a ſaline, ſulphureous, and terreſtrial matter, which precipitates to the bottom of the urine.

Diſeaſes cauſe a remarkable change in the urine.

Light,

Light, thin, watery urine, ſhews the perſon to be afflicted with internal ſpaſms, the hyſteric paſſion, hypochondriac pains, the cardialgia, the ſtone, or gravel, or the convulſive cholic. In diſeaſes of the head, ſuch as the vertigo, frenſy, madneſs, melancholy, epilepſy, the urine is always thin and light. It is likewiſe the ſame in the more grievous affection of the nerves, from poiſon or worms. This ſtate of the urine not only happens in the fits, but ſome days before and after.

When the urine is thin, aqueous, and white, it preſages danger in obſtinate diſeaſes; if it is copious in the ſtate of fevers, and before the criſis, it portends a frenſy. In internal inflammations it is always dangerous; the more copious, the worſe.

After a dyſentery, a ſpotted fever, or ſmall-pox, this kind of urine is common. In a cachexy, leucophlegmatia, enormous bleedings in the beginning of an anarſarca, in the green-ſickneſs, in a ſuppreſſion of the menſes, the urine is crude, turbid, pale, greeniſh, or of a light citron colour, and copious.

In all preternatural febrile heats, the urine is yellow, or red, and in ſmall quantity. Such kind of urine which is more or leſs red, or thin and light, or thick and heavy, is uſually in intermitting and continual fevers. In the fit, that is, in its exerbation or ſtate, the urine is thin, clear, and without ſediment; in an ardent and bilious fever, the urine is generally pellucid, but of a flame colour. In intermittents after the fit, and on the well day, it is thick, and depoſits a ſediment; if this happens in continual fevers, after the criſis, it ſhews the fever to be ended.

If the ſediment is of a roſy or purple colour, it ſhews the blood is in fault, as is evident in continual fevers. When it is intenſely yellow, it diſcovers that the bile is in fault; when it is brown,

or black, there is plenty of black bile, as in a ſcorbutic or miliary fever, and in quartans of a dangerous nature. When it is very plentiful, and full of viſcid and crude humours, in replete, obeſe, and ſpongy bodies, it ſhews the obſtinacy of an intermittent fever.

As it is a good ſign when the urine is thick, and depoſits a ſediment, in fevers, ſo, on the contrary, if there is no ſediment in intermitting fevers, but the urine continues clear, and lets fall no ſediment in the cold fit, it is a bad ſign. If, after the fit, it has no ſediment, but is pellucid, it is a very bad omen. In all inflammatory fevers, if the urine is clear, and of a purple colour, or brown, and of a deep colour, frothy, and without ſediment, it is a bad ſign. Likewiſe, it is always obſerved, that in a continual fever, if the urine is turbid, and does not grow clear either by the fire or reſt, nor depoſits a ſediment, it is a very dangerous preſage; it is likewiſe very bad, when, in continual fevers, it is thick on the firſt days, and in the remainder, eſpecially the critical days, it is thin and without ſediment.

In the decline of catarrhal fevers, and in the ſmall-pox and meaſles, if the urine was clear and aqueous, but is now thick and high-coloured, with a ſediment, it is a certain ſign that the diſeaſe remits.

In conſumptions, and all other violent and chronical diſeaſes, if the urine is thick, little, high-coloured, and a dark red, with a copious ſediment, and a fatneſs ſwims upon the urine, and adheres to the ſides of the urinal, the body at the ſame time waſting away, it is a ſign of a ſlow hectic fever, which is generally fatal. The like danger is threatened, when, in dropſical perſons, the urine is like that of hectics; for its ſcarcity is a ſign that the lympha is extravaſated into ſome cavity or porous ſubſtance, and if the colour is of a deep

red,

red, with a groſs ſediment, it ſhews the inteſtine motion and heat diſſolves the blood, that the liver is obſtructed, whence a bilious ſordes is ſeparated therefrom.

In chronical diſeaſes without a fever, when the urine is thick, high-coloured, and of a reddiſh brown, as well as heavy, as in a confirmed ſcurvy, gout, ſcorbutic palſy, and in extreme old age, as alſo in a nephritic paſſion, when the pains ceaſe, as well as in the yellow and black jaundice, it ſhews plenty of ſaline and ſulphureous excrementitious parts, wherewith the blood and humours abound, and are not duly ſecreted therefrom, by reaſon of an obſtruction of the liver. WILLIS has obſerved, that patients dying of the ſcurvy, have had their livers almoſt without blood, and like a cow's udder; in ſome, the gall-bladder was either empty, or full of ſtones, or very bitter filth.

When the urine is thick, of a deep colour, and dyes linen yellow, it is a certain ſign that the bile is obſtructed, or the ducts conſtricted with a ſpaſm, whence the paſſage of the bile into the duodenum is hindered, whence it regurgitates by the lymphatic veſſels into the blood and lympha, and produces a jaundice. When the colour is of a browniſh black, it is a ſign of the black jaundice, which proceeds from an impeded ſecretion of the bile in the liver.

Sometimes the urine is imbuted with an oily matter, and is made without noiſe, there are various colours on the ſurface, chiefly blueiſh, and it adheres ſo ſtrongly to the ſides of the urinal, that it cannot be waſhed off with a lixivious liquor. This is a ſign of the colliquation of the fat. SILVIUS gives an inſtance of a young woman who had it like butter; and FERNELIUS mentions a man, who, in eight days, was reduced from a large ſize to be very ſlender, without any other diſeaſe; it ſhews a conſumption, an atrophy,

phy, and a hectic. Sometimes this is obſervable in fevers, and the oleous matter is more plentiful in proportion to the fatneſs of the body.

When the urine abounds too much with a tartareous matter, which is known by its adhering to the ſides of the veſſel, it is a ſign of a diſpoſition to the gravel and ſtone. When there is ſmall ſand in the urine, it ſhews thoſe diſorders to be actually preſent. Sometimes ſhining yellow chryſtals are ſeen on the ſides of the pot, which is a ſign of arthritic or rheumatic pains. When the urine is bloody, or whiteiſh, from a mixture of pus, or loaded with a glutinous, thick, tenacious matter, of a bad ſmell, which ſinks to the bottom, and does not diſſolve by the agitation of the veſſel, it is a certain ſign of an ulcer in the kidneys or bladder; ſometimes in the ſtone and ulcer of the bladder, it is like the white of an egg, and ſo tenacious, that it will not divide, but falls from the veſſel at once.

In a chronical and malignant gonorrhœa, not only the proſtatæ, but often the bladder is ulcerated, whence a thick, turbid urine, with a copious ſediment, which thrown on the coals, has a moſt fœtid ſmell. Likewiſe in the ſtone of the bladder, this, or its ſphincter, is ſo eroded, that the urine is thick and branny, with ſmall caruncles and filaments, which the vulgar take for worms. In the ſtrangury there is a frequent ſtimulus to make water, which is little and muddy, ſalt and ſharp, with filaments; and then there is ſome ſpaſmodic diſorder affects the ſphincter. If blood is mixed with the urine, like the waſhings of fleſh or red wine, but falls to the bottom, of a purple colour, it proceeds from the kidneys; but if it be of a browniſh black, it comes from the veins of the bladder.

DIETETICS; OR, THE USE OF THE NON-NATURALS.

THE non-naturals are ſix :---the air, meats and drinks, ſleep and watching, motion and reſt, the paſſions of the mind, the retentions and excretions.

The air is a fluid, elaſtic ſubſtance, which ſurrounds us on all ſides, which penetrates our bodies, and yet ſo fine, that it eſcapes our ſight. Its properties are fluidity, elaſticity, and weight; it is rarefied by heat, and condenſed by cold.

It is ſo neceſſary, that an animal cannot live a moment without it, and it ſerves for reſpiration to tranſmit ſmells, colours, and ſounds. By its fluidity it inſinuates into the veſicles of the lungs, and into the blood, by means of the aliments. By its elaſticity, the ſmall quantity of it contained in the blood, keeps up the equilibrium with the weight preſſing externally upon our bodies.

The air is ſuſceptible of different qualities. It may be hot, moiſt, cold, dry, ſerene, pure, and temperate. It is ſubject to variations, more or leſs, and to be mixed with impure, corrupted, contagious, metallic, ſulphureous exhalations, which are all prejudicial to health. The beſt quality of the air is to be pure and ſweet, void of all bad exhalations, neither too hot, nor cold, nor dry, nor moiſt.

The ſudden changes of the air are enevitable and dangerous, whence proceed a great number of diſeaſes, which reign in the ſpring and the autumn, towards the approach of winter. Hoſpitals, camps, places where lead is melted, and the earth juſt thrown up, are generally unhealthy, on account of the bad exhalations. Lighted charcoal in a cloſe place fills the air with ſulphureous particles, which are unwholeſome, and ſometimes kill the ſtrongeſt perſons.

Too

Too hot an air diſpoſes to malignant fevers; if it be without moiſture, it produces putrid fevers. Agues are epidemic in the fens of Cambridgeſhire, the hundreds of Eſſex, and in ſome parts of Kent, on account of the vapours, which weaken the fibres of the body, and obſtruct the pores of the ſkin; beſides, a cold and moiſt conſtitution of the air produces coughs, diſtillations, pleuriſies, rheumatic pains; as alſo agues and fevers of the like kind.

Hectic and conſumptive people are in great danger in very hot and in very cold weather. When the paſſage through the pores of the ſkin is ſtopped by cold, the patient is apt to fall into a looſeneſs, otherwiſe the legs commonly ſwell, and aſthmatic ſymptoms will increaſe.

The loſs which we ſuſtain daily, makes it neceſſary that it ſhould be repaired by ſubſtances analogous to thoſe of our body, ſuch as aliment and drink, the ſtimulus to which is hunger and thirſt; wherefore it is neceſſary to know in general their kinds and principal qualities, in order to make a proper choice.

Solid aliments are taken from ſeeds, fruits, leaves, ſtalks, and roots; of all which the ſeed is the moſt laboured, and contains a mealy and milky ſubſtance, from whence a ſoft oil may be drawn, friendly to human bodies.

The principal and moſt general aliment is bread, which is made of wheat, rye, barley, and Turkey corn. That of wheat is moſt nouriſhing. Barley is dry, and rye is laxative. The cruſt is moſt eaſy of digeſtion; the crumb is more oily and heavy.

The other farinaceous ſubſtances are beans, peas, and lentils, which nouriſh much, but are heavy, windy, and viſcous; and conſequently, for conſtant uſe, are apt to cauſe obſtructions.

Rice, barley, and oats, properly prepared, are

are moiſtening, emollient, and reſtorative. Nuts, almonds, and cheſnuts, are full of a nouriſhing oil, but are hard of digeſtion.

Fruits which are pulpous and tart, abound with water, and are refreſhing, moiſtening, and ſedative; appeaſing the too rapid motion of the blood, quenching thirſt, and digeſting eaſily; ſuch as ſtrawberries, gooſberries, currants, apricots, and figs; as alſo peaches, pears, and apples: theſe ſhould be eaten ripe, and in a ſmall quantity; but they are windy, and therefore are beſt boiled, or baked, and made into ſweetmeats.

Pot-herbs and roots are leſs nouriſhing than the mealy ſubſtances. Lettuce, ſuccory, ſorrel, purſelain, refreſh, moiſten, looſen the belly, and appeaſe the orgaſm of blood. Artichokes, cellery, creſſes, aſparagus, and parſley, are a little heating. Truffles, champignons, garlic, ſhallots, pepper, cloves, nutmegs, muſtard, &c. heat very much.

Animals are terreſtrial, volatile, aquatic, or amphibious. Theſe differ greatly with regard to their kind, age, manner of living, and ſubſtance.

Fiſh nouriſh the leaſt of all animals, becauſe they abound with phlegm. Young animals abound with a ſoft and nouriſhing juice, but that of the older is more ſubſtantial. The juices of the old are ſpirituous, gelatinous, and agreeable to the taſte; but the fleſh is hard, and difficult of digeſtion.

Wild animals are more light and digeſtible than the tame. Their white parts contain a very ſucculent ſubſtance of tender fibres, and yield a ſoft aliment, and are eaſy of digeſtion.

Liquid aliments are milk, eggs, chocolate, ſoup, and broths.

Milk is properly nothing but chyle, and conſequently does not need any great preparation in

the ſtomach. It is a good aliment for weak perſons, whoſe ſtomachs are languid, and for children.

New-laid eggs yield very good nouriſhment, are eaſy of digeſtion, and agree with perſons of an exhauſted body, and thoſe that are old.

Chocolate is a very agreeable liquor, and nouriſhing; ſtrengthens the ſtomach, reſtores the body, helps the digeſtion, and ſoftens ſharp humours. It is proper for perſons of weak ſtomachs.

Drinks reſtore the fluid parts of the body; they are a vehicle for other aliments, and render the digeſtion eaſy. Water is the principal, moſt ſalutary, and moſt neceſſary for life; of which ſoft water is the beſt, and which readily lathers with ſoap. It is the greateſt diſſolvent that we have. Water alone has cured many indiſpoſitions; but over much relaxes and weakens the ſolids, and cauſes many infirmities.

Wine taken too freely, is prejudicial to health; but moderately, it ſtrengthens the ſolids, and facilitates digeſtion; its exceſs, as well as all other ſpirituous liquors, hardens the fibres, affects the nerves, diminiſhes the ſecretions, deſtroys the appetite, and induces chronical diſeaſes.

That malt-liquor is accounted beſt that is ſpecifically lighteſt, and not ſaturated with too groſs a ſubſtance, for then it does not offend the ſtomach, but paſſes readily through the emunctories of the body, and particularly by urine. The beſt kind of beer does not render the head heavy, nor grow ſour on the ſtomach, nor inflate the hypochondria. This depends greatly upon the goodneſs of the water, the proper boiling of the ingredients, and a due fermentation.

All thick, muddy, heavy, ſtale beer, not ſufficiently boiled, offends the head, generates wind, cauſes obſtructions, the ſtrangury, aſthma, and the cholic.

Tea

Tea promotes perſpiration, ſtrengthens and clears the ſtomach, and helps digeſtion.

Coffee is taken after dinner to haſten the digeſtion, and allay the fumes of wine. Moderately uſed, it ſubtilizes the humours; but its exceſs agitates the blood, cauſes watching, and promotes hæmorrhages.

Broths or ſoups abound with a ſoft, moiſtening, and nouriſhing jelly, whence they are good reſtoratives. Meat that is roaſted contains an excellent nouriſhing juice, the moiſt parts being diſſipated by the fire.

Things that are fried are only proper for good ſtomachs.

Spice, vinegar, &c. in a ſmall quantity, may correct the faults of the aliment, but are pernicious when uſed to create an appetite; whence made diſhes are commonly bad. The appetite excited by the quality and diverſity of the viands, provokes perſons to eat more than they ought; which cauſes indigeſtions, frequent indiſpoſitions, and ſometimes dangerous diſeaſes. Therefore the ſkill of the cooks of theſe times, contributes greatly to ſhorten their maſters' lives.

The method of preſerving health, therefore, is to live upon plain, ſimple aliment, lightly ſeaſoned, and in a quantity agreeable to the age, ſtrength of the ſtomach, ſeaſon of the year, ſex, conſtitution, and chiefly to what nature has been found by experience to require. For it is as great a fault to take too much as too little. Perfect digeſtion is the beſt rule for regulating a meal, eſpecially if the perſon is more briſk and lively after a repaſt than before.

We have examples of many perſons, who by their frugality have lived to a very advanced age; wherefore thoſe that are fond of life and health, ſhould imitate their regimen. Exceſſes in eating and drinking are extremely pernicious.

Perſons of a delicate conſtitution, or who are juſt recovered from a diſeaſe, ſhould uſe ſoft, light aliment, agreeable to the ſtomach; for they make the beſt chyle.

Acrid, tenacious, viſcous aliment, pies of all kinds, and things that are fat, and of a blackiſh ſubſtance, are generally unfit for chylification, or they render the chyle bad.

Strong, robuſt, young perſons, who uſe much exerciſe, ought to eat more than others; and may be more free with the groſſer kinds of aliment. For their ſtomach being ſtrong, the lighter kind of food would digeſt too eaſily, and be diſſipated too ſoon.

Children whoſe ſtomachs are weak, and veſſels fine, ought to uſe a light, thin, ſlender, ſoft aliment, eaſy of digeſtion. Wherefore infants ſhould be fed with fluid milk, to avoid cauſing obſtructions in their fine and delicate veſſels. Wherefore the milk of a nurſe newly brought to bed is more agreeable to infants than that of one who has been delivered five or ſix months, and whoſe milk begins to have too great a conſiſtence. Nurſes ſhould obſerve an exact regimen, and ſhun all ſorts of violent paſſions; for they diſturb digeſtion, and communicate their bad effects to their children. When infants are weaned, they ſhould not be accuſtomed to ſpirituous liquors and ſtrong food, eſpecially the ſalt and ſmoke-dried, which are hard of digeſtion, and yield bad nouriſhment. The beſt method is to eat little at a time, and often.

In old age the fluids are more thick, the ſecretions ſlow, and the ſolids more ſtiff than in youth; wherefore they require leſs food, and of a more ſoft, nouriſhing, and moiſtening kind, eaſy of digeſtion, and not too much at a time, eſpecially in the evening.

At all times of life, but eſpecially in old age, the

the conſtant and immoderate uſe of ſalt and ſmoke-dried meat, acid and aromatic vegetables, as well as ſpirituous liquors, tend to harden and to ſtiffen the parts of the body, inſtead of affording good nouriſhment. Beſides, the digeſtion of theſe aliments is difficult, and render the blood ſo acrid, as to hurt the capillary veſſels.

However, an acquired habit is hard to be left off, and we find many perſons enjoy a good ſtate of health when their meat and drink are very indifferent, becauſe they are become cuſtomary, and they are apt to fall ſick when they attempt to change their manner of life; for cuſtom is a ſecond nature. All great changes ought to be brought about inſenſibly.

For this reaſon it is good not to contract a habit of any kind; wherefore perſons of a good conſtitution ſhould live in a various manner, and refuſe no kind of aliment; and ſhould ſometimes be in town, and ſometimes in the country, ſhould uſe much exerciſe, and ſhould every now and then exceed the exact bounds of moderation, and at other times omit a meal now and then.

Hunger ſhews the beſt times of eating, but cuſtom confines us to certain hours. Perſons who find no inconvenience from dining and ſupping every day, need not change their manner of life. In youth, wherein there is a great diſſipation, and in age, where ſtrength is wanting, and when much is not eaten at a time, ſomething taken between meals is not amiſs. However, it is neceſſary to obſerve, that when the ſtomach is bad, perſons ſhould not begin to eat again till the laſt meal is digeſted.

When a perſon is greatly fatigued, and his ſpirits diſſipated, it will be neceſſary to reſt before eating. In caſes of diſtreſs and ſorrow, the aliment ſhould be very light, and in ſmall quantity, becauſe the ſtomach is weak at thoſe times.

In

In the ſummer, when the ſpirits and fluid parts are apt to evaporate, the aliment ſhould be light, moiſt, fluid, and eaſy of digeſtion, to repair the loſs with greater ſpeed; whereas in winter the ſtomach will admit of groſſer food.

As digeſtion depends, in part, on the due preparation of the aliments, it is neceſſary to chew them well, eſpecially if they are hard, that they may be more intimately mixed with the ſaliva. For thoſe who eat in a hurry, without much chewing, are very ſubject to indigeſtions. For this reaſon infants ſhould have little ſolid aliment, and old perſons, and thoſe who have loſt their teeth; for maſtication is of excellent uſe to promote digeſtion; wherefore light food is beſt for thoſe who cannot perform it.

It is not poſſible for thoſe to preſerve their health, who do not go to ſleep in a regular manner; for ſleep repairs the ſpirits which are diſſipated by watching; and conſequently it reſtores the ſtrength of thoſe who are weak, indiſpoſed, or labour much; it likewiſe promotes perſpiration, contributes greatly to digeſtion, and more to nutrition.

The night, when all nature is in a profound tranquillity, is the moſt proper time for ſleep; for the vigour of the body and mind are better reſtored in the night than in the day. Thus nocturnal labour and lucubrations impair the health.

A ſound undiſturbed ſleep is much the beſt. Unquiet interrupted ſleep contributes little to reſtore the ſtrength, but hinders perſpiration and digeſtion.

Exerciſe and cuſtom ought to regulate the duration of ſleep; ſix or ſeven hours at a time is generally thought to be ſufficient; for too much ſleep makes a perſon ſluggiſh and heavy, dulls the faculties, and renders them unfit for buſineſs.

Immoderate

Immoderate watching is as prejudicial to health as ſleep is beneficial. It may occaſion great diſorders in the animal economy, by waſting the ſpirits and fluid parts of the blood. The beſt place for ſleep is in a dry ſpacious room, where the air is good; for cloſe, little, moiſt places, too much heated, are bad. The beſt poſture is to lie on the right ſide at night, and on the left in the morning, with the head raiſed, and the body bent.

Motion and reſt contribute no leſs to health than ſleep. Motion or exerciſe increaſes the circulation of the blood, attenuates and divides the fluids, and promotes a regular perſpiration, as well as a due ſecretion of all the humours; for it accelerates the animal ſpirits, and facilitates their diſtribution into all the fibres of the body, which ſtrengthens the parts, creates an appetite, and helps digeſtion. Whence it ariſes, that thoſe who accuſtom themſelves to exerciſe, are generally very robuſt, and ſeldom ſubject to diſeaſes.

But immoderate exerciſe diſſipates the ſpirits, weakens the body, deſtroys the elaſticity of the fibres, and exhauſts the fluid parts of the blood.

Exerciſe may be ſaid to be either active or paſſive; the active is walking, hunting, dancing, playing at bowls, and the like; as alſo ſpeaking, and other labour of the body and mind. The paſſive is riding in a cart, coach, on horſeback, or in any other manner. Exerciſe may be continued to a beginning of wearineſs, and ought to be uſed before dinner, in a pure light air. For this reaſon journeys and going into the country contribute greatly to preſerve and re-eſtabliſh health.

Moderate reſt, in proportion to the exerciſe, is likewiſe ſalutary; but a ſedentary, idle life, brings on many indiſpoſitions.

Excretions (I mean thoſe which evacuate ſuperfluous and heterogeneous humours) purify the maſs of blood. The humours which are gene-

rated

rated in the blood, are excreted by the glans, and are replaced by a ſufficient quantity of aliment. This, in adults, keeps the body of an equal weight, and conſequently preſerves life and health. Therefore the ſecretions ſhould neither be diſturbed nor diminiſhed, ſuppreſſed nor increaſed. I ſhall obſerve, that perſpiration may be promoted by dry frictions, with a coarſe linen cloth, or a fleſh-bruſh, and by cleaning the ſkin from time to time by warm baths, waſhing the hands, feet, head, and other parts, which perſpire much.

It is well known that cold ſtops the pores, and diminiſhes both ſweat and perſpiration. To ſhun this inconvenience, it will be neceſſary to put on winter-garments pretty early, and to leave them off late, and not to paſs too ſuddenly from hot into cold air, and to avoid drinking any thing cold when the body is hot, or when a perſon has been ſpeaking publicly for ſome time.

The paſſions and affections of the mind produce very ſenſible effects. Joy, anger, and fear are the principal. In the firſt, the ſpirits are hurried with too great vivacity; and in fear or dread, they are, as it were curbed and concentrated. Whence we may conclude that they have a bad effect upon health, and therefore it will be beſt to keep them within bounds as much as poſſible, and to preſerve an inward ſerenity, calmneſs, and tranquillity.

Continual ſorrow and anguiſh of mind render the fluids of the body thick, and generate viſcid and acid crudities in the ſtomach, and at length render the blood unapt for a due circulation; whence proceed obſtructions of the viſcera, and many chronical diſorders. Anger conſtringes the bilious veſſels in particular, cauſes too great an evacuation of the bile, and produces ſtrictures in the ſtomach and duodenum; whence the bilious humours are amaſſed and corrupted, laying the foundation

foundation for vomiting, bilious fevers, and cardialgiæ. Paſſions of the mind in general chiefly affect the ſtomach, invert its motion, and hinder digeſtion and chylification; whence many crudities ariſe, replete with various diſeaſes; and it is very dangerous after violent commotions of the mind to ſit down to a meal, or during that time to be greatly affected with any accident that may happen.

REMARKS ON THE CONSTITUTION OR TEMPERAMENT OF BODIES.

THERE are as many definitions of a temperament, as there are different ſyſtems or principles. The peripatetics ſay it is a mixture of the four firſt qualities. An equal temparament, then, is when one does not predominate over the other, or when they preſerve a certain proportion, ſuitable to nature. But this is ſeldom or never to be found; for temperaments differ according to the ſex, age, climate, country, ſeaſon, and kind of life. The common diviſion of the temperaments was into hot, cold, moiſt, or dry. Which compounded, were hot and moiſt, hot and dry, cold and moiſt, and cold and dry.

Dr. BOERHAAVE, in his Inſtitutions, mentions eight different conſtitutions, or temperaments, of human bodies: viz. hot, cold, moiſt, dry, belioſe, ſanguine, phlegmatic, and melancholic.

Some of the ancients regarded only the fluids, which they determined to be four: the blood, phlegm, choler, and melancholy, or the *atra bilis*; hence there were four kinds of temperaments: the ſanguineous, the phlegmatic, the bilious, and the melancholic, which being variouſly compounded, made as many different temperaments.

Some of the moderns imagine that the eſſential parts of the blood are acid, auſtere, acerb, ſaline, acrid, bitter, oily, ſweet, and inſipid; wherefore

they make the temperament to conſiſt in a due proportion or mixture of theſe; and when any of them predominated, the temperament was ſaid to be unequal.

Thoſe who refer every thing to the ſolids, and look upon the fluids only as paſſive, and governed by the ſyſtaltic motion of the veſſels, deduce the temperaments from the ſpring of the fibres, whereof the body is compoſed. According to theſe, the fibres are more or leſs ſtrong, firm, or lax; and their elaſticity, their ſyſtole, their oſcillations are more or leſs lively, frequent, and regular; whence the temperaments become ſtrong, lax, hot, cold, moiſt, dry, or unequal.

Others, again, ſay, that the temperament is a particular diſpoſition of the human body, which reſults from the properties and mutual actions of the ſolids and fluids; and which renders them capable of exerciſing the functions proper and conformable to nature.

An equal temperament is that wherein the four qualities, heat, cold, dry, and moiſt, or the four humours, blood, phlegm, bile, and melancholy, are mixed in a due proportion; in which the ſolids and fluids have a proper equilibrium, ſo that the fibres are neither too hard nor too ſoft, nor too tenſive nor too lax; and which procures, by their conſtant ſyſtoles, a progreſſive and circular motion to the liquids, which tend to attenuate them, while the liquids on their part have a conſiſtence and ſoftneſs proper to comply with the motion of the veſſels, and to act upon their ſides by their elaſticity and reaction, without irritation. Such perſons in their diet ſhould uſe only temperate aliments, and carefully avoid both things which may render their bodies hotter and dryer, and likewiſe thoſe things which tend to make them cooler and moiſter.

A hot or ſanguineous temperament requires

ſtrong

ſtrong, robuſt fibres, regular in their ſyſtoles and oſcillations, with a red, ſoft, balſamic blood, and full of ſpirits; the perſons are neither too fat, nor too lean, but have a freſh, florid complexion, a ſtrong, regular pulſe, an eaſy reſpiration, ſweet ſleep, and are gay, ſincere, polite, modeſt, and amourous. People of this conſtitution ſhould make uſe of diluting and moiſtening aliments, for all heating and drying food ſhould be avoided, or very ſparingly uſed.

The moiſt or phlegmatic temperament conſiſts in ſoft, moiſt, lax fibres, whoſe ſyſtoles and oſcillations are weak and languid; the fluids too aqueous, inſipid, raw, indigeſted, and copious. The pulſe is ſoft, ſlow, ſluggiſh, and deep. The ſkin, the fleſh, and the fat are pale and ſoft. The hair is lank, and of a light colour. The perſon is heavy, indolent, timid, and fearful; void of vivacity, of the ſenſes, and actions.

The dry and bilious temperament conſiſts of ſlender, ſtiff, dry, hard, tenſive, and too elaſtic fibres, which move and agitate the fluids with too much impetuoſity. The bile predominates in the fluids, which are thin, acrid, ſaline, and ſulphureous, and irritate the ſolids and ſyſtoles. The heat of the body is conſiderable, the aqueous parts are diſſipated, the ſulphureous are attenuated, inſenſible perſpiration is too copious, and the ſpirits are ſubtile and active. The perſon is lean and dry, the ſkin yellow, the hair red and curled, the pulſe quick and hard, the ſenſes lively, the ſleep ſhort and diſturbed, the mind ready, light, inconſtant, and choleric; the paſſions for pleaſure are ſtrong. The blood is generally of a dark colour; and the *bile* ſubject to be changed into a black colour, called *bilis atra;* thoſe of this conſtitution require aliments ſomewhat warming and corroborating, and ſhould be cautious in the uſe

of things that are cooling, and which tend to render the quantity of lymph exceſſive.

The cold, melancholy, or atrabilious temperament proceeds from thick, compact, dry, ſtiff fibres; and fixed, groſs, acid, auſtere, ſaline humours; whence the ſyſtaltic motion of the ſolids are ſtrong, ſteady, and ſlow. The animal ſpirits are groſs and elaſtic; the perſons are ſtrong, robuſt, laborious, and a little lean; their complexion is brown and blackiſh, the hair black, the pulſe ſlow and ſtrong, and their looks rough; they are apt to be abſent in thought, ſilent, grave, laborious, ſolitary, inflexible, and void of compaſſion; they are amorous, without politeneſs, but obſtinate in love or hatred, and extravagant in their opinions; their ſleep is diſturbed, their dreams are diſmal, they ſpeak little, and are fond of their own notions.

But none of theſe temperaments are to be met with pure and ſimple. They are all mixed, and border upon each other, with as great a variety as there are faces in the world.

OF THE PRINCIPLES OF LIFE AND DEATH.

THE human body, as a ſyſtem of living matter, contains an amazing conſtruction of parts, admirably contrived, connected, and adapted to their proper uſes, among which are various ſorts of veſſels, replete with their proper fluids; parts to receive aliments, and organs to *ſecrete digeſtive* or diſſolvent humours from the blood, for converting our food into a nutritious chyle, as well as veſſels to convey that chyle into the blood and veſſels, to carry nutriment for repairing the daily waſte of the body: ſo it hath organs for *excreting* from the body whatever may be ſuperfluous, uſeleſs, or hurtful to it. It has organs for all thoſe *ſenſes* which may be uſeful to man. It has many bones;

bones; some for the defence of the noble parts inclosed within them: as the cranium is a defence for the brain. It has the vertibræ of the neck for the support of the head, and for the defence of the parts adjacent; it has the scapula, the vertibræ of the back, and the ribs, for the security of the heart and lungs; it has bones to sustain the trunk, and to form the limbs; it has muscles, not only as a clothing to the bones, but to be instruments of moving them acording to all incidental occasions, or voluntary motions: and it has organs for secreting a fluid we call *nervous*; a fluid necessary to all the *vital*, the spontaneous, and to all voluntary motions; it has, likewise, organs for secreting the *semen masculinum*, and for all purposes of generation, for propagating the species.

The general fluids subsisting and circulating in all parts of the human body, are the blood, or red fluid, the lymph, and the liquor of the nerves.

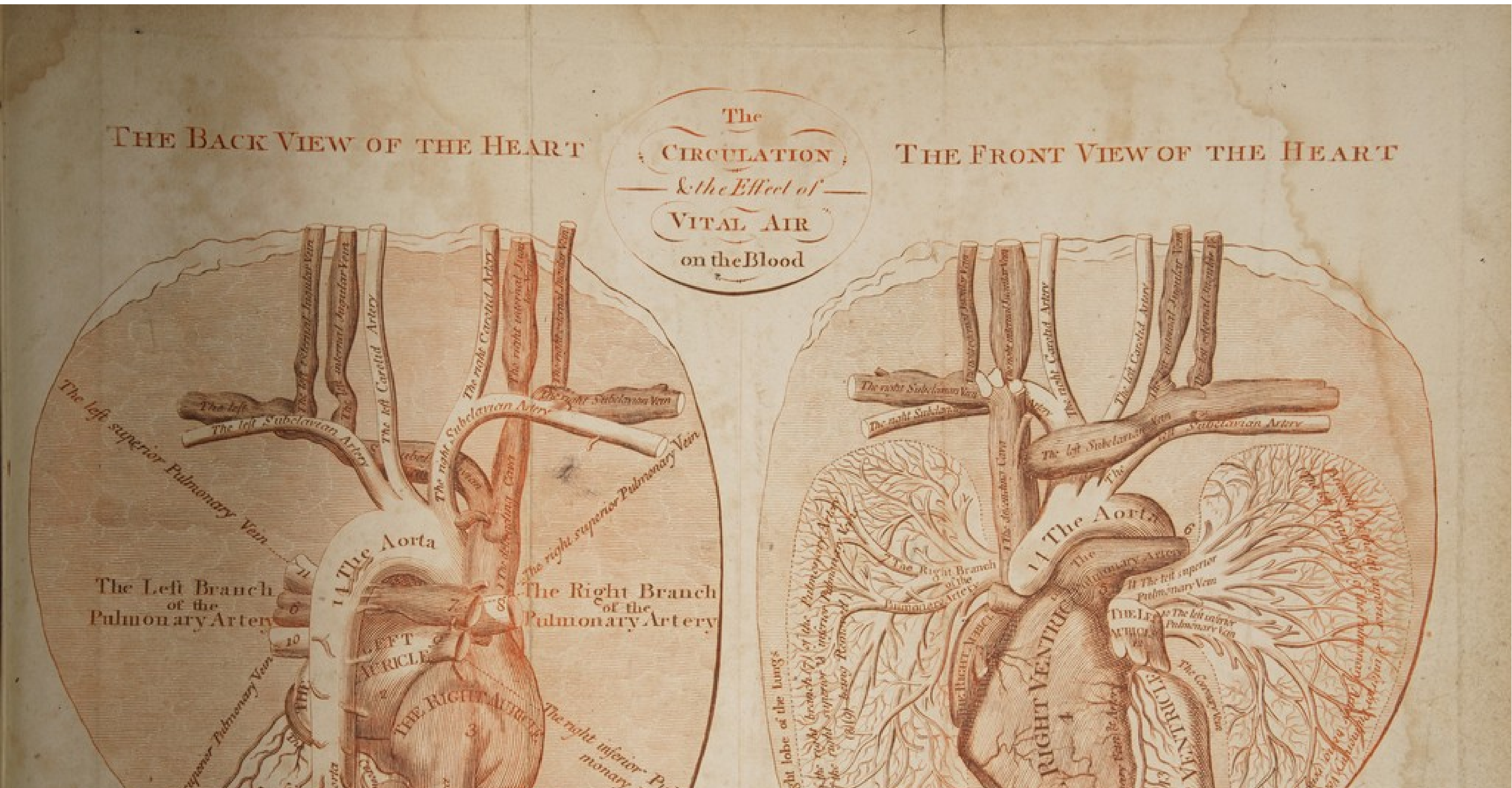
The red blood is the central fluid, for which every thing taken into the stomach supplies nourishment, to maintain life and health; for which purpose all the *viscera*, vessels, glans, and other parts of the body serve either to receive, attenuate, prepare, and convey *aliment* to the *blood*, which becomes wanting by means of its daily expences; or to receive and separate from it those fluids which are necessary for maintaining the *vital*, the *natural*, and the *animal functions*. Or otherwise to separate or excrete from the blood what is hurtful or superfluous; and it is upon this account that the BLOOD may be esteemed the *central fluid* in the body; and, for the like reasons, the HEART may be called the central solid part of it.

Now, as the HEART is the centre of vital and spontaneous motions, we will attempt to trace those

thoſe motions and their effects. It is to be obſerved, that all the veins of the body enter into two trunks (*vide the Plate*): viz. the *aſcending* (1) and *deſcending* (2) *cavas*, and empty themſelves into the right *auricle* of the *heart* (3); from which the right *auricle* unloads into the right *ventricle* (4), which ejects the blood through the *pulmonary artery* (5) into the *lungs*, by its two branches (6, 7), and from thence to the right and left lobes. From the *lungs* the blood is returned by the *pulmonary veins* (8, 9, 10, 11) into the *left auricle* (12), and from thence it paſſes into the *left ventricle* (13), by which it is diſtributed through the body by means of the *aorta* (14) and its branches; theſe terminate in the veins of the body, which collect the blood, and bring it back to the heart, by the two *cavas* (1, 2); for the heart is divided into two parts, by a longitudinal ſeparation, and theſe two parts are formed into two cavities, by a lateral ſeparation.

By this it appears, that the *left ventricle* of the *heart*, by its *diaſtole*, receives from the *left auricle* the whole maſs of blood; and that by its *ſyſtole* it impels the ſame blood ſucceſſively into the *aorta*, by ſeparate quantities; for the contraction of the *left ventricle* and dilation of the *left auricle*, by receiving at the ſame time more blood from the *lungs*, muſt divide the blood paſſing out of the *ventricle* from the next ſucceeding quantity then following into the *auricle*, though the time of ſeparation is as ſhort as the ſpace between the pulſations of the artery. Thus each quantity of blood impelled into the *aorta* by the contracting of the left *ventricle*, propels the ſucceeding onwards; and by this means the whole maſs of blood is protruded to the extremities of the capillary ſanguine arteries, and through them into the capillary veins, ſo that every quantity of blood ejected from the

left


THE BACK VIEW OF THE HEART
The CIRCULATION & the Effect of VITAL AIR on the Blood
THE FRONT VIEW OF THE HEART
The left Subclavian Artery
The left Carotid Artery
The right Carotid Artery
The right Subclavian Artery
The right Subclavian Vein
The left superior Pulmonary Vein
The right superior Pulmonary Vein
The Aorta
The Left Branch of the Pulmonary Artery
The Right Branch of the Pulmonary Artery
LEFT AURICLE
THE RIGHT AURICLE
The right inferior Pulmonary Vein
The left superior Pulmonary Vein
The Coronary Artery
The descending Aorta
The ascending Cava
THE LEFT VENTRICLE
The right Subclavian Vein
The left Subclavian Vein
The descending Cava
The Right Branch of the Pulmonary Artery
The Pulmonary Artery
The left superior Pulmonary Vein
The left inferior Pulmonary Vein
The Coronary Vein
THE RIGHT VENTRICLE
THE LEFT VENTRICLE
The right lobe of the Lungs
The Ascending Cava
The descending Aorta
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left ventricle of the heart diſtends or forces the *aorta* into its diaſtole; thus the diſtended *aorta*, by a contractile motion, re-acts, and forces the ſaid quantity of blood onwards, that while the *aorta* goes into its *diaſtole*, the *left ventricle* ſinks into its *ſyſtole*, ſo that the motion of the *ſanguine arteries* is regulated by the motion of the heart; for the whole maſs of blood is in diſtinct ſucceſſive quantities propelled through the arteries into their correſpondent veins, and through them into the *vena cava*, and thence it paſſes, by ſucceſſive quantities into the *right auricle* of the *heart*, thence into the *right ventricle*, and thence into the *arteria pulmonalis*; and from the extremities of its ramification into the capillary branches of the pulmonary vein, which in their courſe, by ſome uniting with others, become fewer and larger, till, in ſucceſſive, diſtinct quantities, the blood is conveyed into the *left auricle*, and thence into the left ventricle of the heart, out of which it is again ejected for another circulation.

This is the courſe of the circulating blood, always moved, and always moving; always acted upon by its containing veſſels, and acting againſt the ſides of them, eſpecially in their *diaſtoles*; and the blood flows through them, and is protruded againſt them, and that by the contractile actions of the *auricles* and *ventricles* of the *heart*, and of the *arteries* and *lungs*. MOTION being thus communicated to the blood, and its fluidity maintained, the circulation is continued during life.

Now theſe motions of the blood in the heart have a very powerful effect on the vital parts; for they produce a preſſure in their diaſtoles on all the ſanguine arteries, veins, or lymphatic veſſels, and by their vibrating motion in theſe veſſels adjacent to the ſanguine arteries, produce the diaſtole in the ſanguine arteries, and a ceaſing of that preſſure

preſſure is the effect of their ſyſtoles; and while that preſſure ceaſes, the diameters of the compreſſed veſſels will be extended, as before the preſſure. Alſo, there ariſes another effect, that of *attrition*, or rubbing of the conſtituent parts of the veſſels, which are ſeparated and waſhed off, which parts mix and circulate with the fluids, by which means the blood, and other animal fluids are altered, and rendered unfit for due circulation, then theſe unfit parts are carried off by ſome of the excreting veſſels. There is alſo another effect produced by the vital motion of the heart, and due circulation of the blood, that is *aſſimilation*, or tranſmuting of many parts of the *chyle* into the nature or qualities of the blood, and other animal humours, by which they are made fit to adhere to the fluid and firm parts of the body.

By this it appears, that the *human body* is continually *wearing*, *waſting*, and *decaying*, by reaſon of theſe motions; and alſo, by the means of regular motions, it is continually repairing, and life and health are maintained.

There is another effect of the inceſſant motions of the heart and ſanguine arteries, and the blood protruded through them, that is, the orifices of all the ſecreting and excreting *tubuli* of the ſeveral organs and glans of the body lie open to the blood flowing through the arteries, and that the force of the blood as it paſſes over the orifices of thoſe *tubuli*, together with the force of the contractile motions of the *arteries*, which have alternate *ſyſtoles* and *diaſtoles*, correſpondent to thoſe of the *heart*, continually impels into thoſe *tubuli* ſuch particles as are minute enough to enter and paſs through them, by which means it is abundantly ſufficient for carrying on every ſecretion and excretion that is made in the body from the blood.

There is another effect ariſes from theſe motions, and that is, the *protuſive* motions of the *nervous fluid*;

fluid; for the impulſions of the *nervous fluid* from the blood, in the ſecreting *tubuli*, both of the leſſer and greater *brain*, muſt needs propel onwards a quantity of nervous fluid, before ſecreted, and thereby keep this fluid moving onwards, in a conſtant equal motion, to all parts of the body, that is, to all the vital parts, through the *nerves* which ariſe from the leſſer brain, and to all the organs of the ſenſes and other parts of the body, through the *nerves* which go off from the greater brain; and it is by this afflux of the *nervous fluid* that the motion of the *heart-arteries* and lungs, and of all the ſecreting and excreting organs and *glans*, and likewiſe of all the exerciſes of the *ſenſes*, and all voluntary motions, are maintained and performed in the body.

If we require why ſecretions are not made at all periods of life? the reaſon will appear obvious, that the ſecreting *tubuli* are not, in the firſt years of life, large or open enough to receive from the blood, and admit through them, the humours to be ſecreted; and in great old age they become contracted, and incapable of receiving the humours. This is the ſtate of the ſpermatic ſecreting *tubuli* in children and youth, before they come to the time of life called *puberty*; that is, till their ſpermatic veſſels are large and open enough for their proper ſecretion. So alſo in the decline of life, in old age, when the ſpermatic ſecreting *tubuli* grow more denſe, and their cavities leſs, they gradually become impermeable, and incapable of admitting through them thoſe parts of the blood which conſtitute the *ſemen*; at this time the ſecretion ceaſes. Thus the periodical evacuations in women, and the ſecretion of *milk* in their breaſts, may be very rationally accounted for; for it is evident, that whenever any ſecreting veſſels are in a ſtate capable of receiving from the blood their proper humour, and when ſuch humour is in the blood, and

ſeparable from it, then ſuch ſecretion will happen. From which appears, that the health of the human body depends greatly on its *vital motions*, for there is a certain degree of ſtrength or force in the vital inceſſant motions, and a certain proportion of time in the diſtances of them, which may be called the ſtandard of health, and neceſſary to a continuance thereof; therefore by feeling the pulſe, we find the motions of the heart and arteries, and if we find them too ſtrong or too quick, we may rationally conclude that the others are ſo too; ſo, on the contrary, if the patient is plethoric, and we find a weak pulſe, we then conclude the heart and arteries are ſo too, and that the vital principle is extremely weak. At ſuch time we ſhould not preſcribe any thing to diminiſh the ſtrength, or order veneſection, for that would produce irreparable evil to the conſtitution.

Theſe are the motions of the heart and arteries, with the blood circulating through them, and the motion of the flowing blood againſt its containing veſſels; alſo the motion of the lungs in their ſyſtole and diaſtole, and the action of ſecretion performed by the cerebellum, or larger brain, in the anterior part of the head, from which the ſpirit, or nervous fluid, receives its courſe or motion.

Now while the *vital*, *natural*, and *animal functions*, in human bodies, remain in their natural and proper ſtate, and are rightly performed, a perſon may be ſaid to be in perfect health; therefore as health depends on a certain degree of ſtrength or force in the vital organs, ſo an exceſs or deficiency of the circulating fluids tends to produce morbid ſymptoms.

But as it may be of great importance to the afflicted to be acquainted with ſome of thoſe that declare a morbid quality in the blood, we will recite a few.

For inſtance, an intenſe heat, ariſing from the friction

friction of a ſuperabundance of the red globules in the blood; or a dryneſs of the ſkin, from a deficiency in the quantity of the lymph ſecreted from the blood.

There may be a viſcid quality in the blood: this is the caſe in intermitting, remitting, and all inflammatory fevers, in rheumatic and pleuritic fevers, which may be proved to occular demonſtration, by phlebotomy.

A pulſe quicker than in health, ſhews ſome of the capillary arteries are obſtructed; or if harder, as in pleuriſies, the blood is ſizy or viſcid.

Thoſe ſtools in fevers which are thin and bloody, and thoſe that are colliquative, without blood, thoſe alſo that are putrid and have a cadaverous ſcent, are ſymptoms which diſcover a diſſolvent quality ſubſiſting in the blood.

Colliquative ſweats, that is, ſuch perſpirations which are profuſe, that feel greaſy and clammy, and are attended with a waſting of the fleſh, and a feeble pulſe, and loſs of ſtrength and ſpirits, are a certain ſign of a diſſolvent quality in the blood.

When a fever is thus produced by a diſſolvent quality in the blood, all medicines that are evacuents, as well as phlebotomy, ſhould be avoided, otherwiſe death is inevitable.

Morbid qualities ariſe from other cauſes, and they bring on chronical diſtempers, that is, an acid acrimony in the *primæ viæ*, which ſhews itſelf in the ſtomach and inteſtines; the ſigns that diſcover this quality are ſour belchings, which are the effects of acid particles emitted from the ſtomach, alſo a keen appetite, called canine appetite, which ſhews there is an alkaline or acid diſſolvent acrimony in the digeſtive humours; ſo all kinds of flatulencies, and what is called the heart-burn, ariſe from the ſame cauſe.

A deficiency in the quantity of the animal fluids is one cauſe that produces diſtempers; it is

therefore neceſſary we ſhould be acquainted with thoſe ſigns which declare a deficiency in the quantity of the blood, of the lymph, and of the nervous fluid.

It is to be obſerved, that the quantity of blood is too little in all cachectic leucophlegmatic bodies, and all who are afflicted with intermitting fevers, and in all diſtempers ariſing from a poor and ſizy blood; in theſe caſes there is an alkaline acrimonious diſſolvent quality; this being mixed with the blood, deſtroys its conſiſtence, and renders it too thin, which not only brings on fevers, but colliquative looſeneſſes and ſweats, that have no fever attending them.

If we examine the pulſe in any complaint where a fever is attending, the ſtate of the blood will be very diſcernible; therefore in a fever, if the pulſe continues weak from the beginning, much weaker than in time of health, it ſhews an inſufficiency of the influxes of nervous fluid from the cerebellum to the heart and arteries, for keeping up the force of the action of the vital organs to the healthful ſtandard; and likewiſe a deficiency in the quantity of the fluid ſecreted by the cerebellum, diſcovers *diſſolvent particles* ſubſiſting in the blood, which has deſtroyed many of the component parts of it, and the texture of many of thoſe particles, which will appear ſizy or viſcid.

A pulſe unequal as to time declares an unequal viſcidity of the blood, which runs faſter through the capillary arteries while the thinner parts are flowing, and ſlower while the more viſcid parts are paſſing through them; but a painful reſpiration is the effect of an inflammation or obſtruction in the part pained; ſo an unequal reſpiration is another ſign that ſhews an obſtructed circulation of the blood, and an unequal viſcidity of it; therefore a tongue that is white and furry ſhews that the blood, owing to its viſcid quality, is carried to the extremities

mities of the capillary veſſels, by which the ſuperficies become empty of red blood, and contain only lymph, conſequently look white. But there are different ſorts of viſcid qualities: in fevers the tongue appears moiſt, with aphthæ, that is, with ſmall white ulcers; it is alſo a ſign that the blood abounds with acrimonious and diſſolvent particles, with an additional quantity of lymph, and with very little viſcidity in the blood. There are other ſigns which declare acrid and corroſive particles in the blood, ſuch as pains, itching, gnawing, ſtinging, ariſing from thoſe pungent particles excreted from the blood, and ſtriking againſt the extremities of the nerves affected. Bloody urine, in fevers, diſcovers a diſſolvent quality in the blood, and that the excreting tubuli of the kidneys is relaxed, otherwiſe the blood could not paſs from the kidneys with the urine. So is that urine a ſign of a diſſolvent quality in the blood, that emits a cadaverous ſcent: it alſo ſhews a putrefaction of the fluids or ſolids of the body, ſimilar to that which always follows death.

If a pulſe, in fevers, is like that in a ſtate of health, it ſhews there are no obſtructions in the capillary arteries, conſequently there are no particles or viſcid humours in the blood, too large for an eaſy circulation, yet it ſhews ſuch fevers were produced by diſſolvent cauſes, or a diſunion in the component parts of the animal fluids.

An eaſy reſpiration, in fevers, attended with a dry and black tongue, is another ſign of a diſſolvent humour in the blood; but there is no conſiderable viſcidity in it, nor particles too bulky to paſs through the capillary arteries, yet it diſcovers there are acrimonious and corroſive particles deſtroying the conſiſtence of the animal fluids, making them thin and corroding, and deſtroying the emiſſary ducts ſituated in the ſuperficies of the tongue.

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If the quantity of red globules does not bear a due proportion to the ſerum of the blood, but is much leſs than the ſtandard of health, we may ſay, in ſuch a perſon, the blood is deficient *. We may eaſily know when the quantity of blood is deficient, for the pulſe is weak, and this ſhews the nervous fluid has not been ſecreted in due quantity; and as there is a deficiency in the quantity of this ſecretion, it ſhews a deficiency in the quantity of the blood: and it is eaſy to apprehend, that when the quantity of blood is too little, the quantities of the humours ſecreted from it muſt likewiſe be too little. This is a cogent argument againſt taking away blood from perſons who have not too much; as the quantity of the important fluids ſecreted from the blood is leſs than it ought to be.

An habitual chillneſs, or coolneſs of the body, than in time of health, is another ſign of the deficiency of blood; ſo is a feebleneſs of the natural and animal functions another diagnoſtic that the blood is too little; ſo if we find the body in a waſting ſtate, it ſhews the ſame.

Acute diſtempers ſoon occaſion a diminution of the quantity of the blood; for perſons that are ſeized with them, immediately loſe their appetite, and cannot take their uſual quantity of aliment; and yet the expenditure from the blood is continually making, conſequently their ſtrength muſt daily grow leſs.

There are alſo ſigns which declare a deficiency of lymph, but this is not ſo much to our purpoſe; however we will mention a few. An extreme heat of the body, as in ardent fevers, which forces the thinneſt parts of this fluid to perſpire, and paſs out of the body, and at the ſame time inſpiſſates the blood, and abates the ſeparation of the lymph

* It is obſervable, the mean quantity of current blood in a healthy body is about the nineteenth part of the weight of that body.

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from it into the lymphatic arteries; ſo when the fleſh is dry and parched, it is a ſign of the like ſignification; becauſe if there was a ſufficient quantity of the lymph flowing through the lymphatic veſſels, the fleſh could not be in ſuch a dry and parched ſtate.

There are alſo certain ſigns which indicate a deficiency in the quantity of the nervous fluid, although it muſt be allowed that thoſe who have the quantity of blood too little, manifeſt that the quantity of nervous fluid is leſs than it ought to be; nevertheleſs we will mention a few things as a criterion to judge by: as, a weak pulſe; a chillneſs or deficiency in the vital heat; a feebleneſs in the performance of the vital, natural, and animal functions; exceſſive evacuations of any kind; a want of appetite, or an incapacity of receiving and digeſting a ſufficient quantity of aliment to ſupply the daily expences of the blood; a continual ſickneſs at the ſtomach in acute diſtempers, with a diſpoſition to faintings, and a conſtant lowneſs of ſpirit. From theſe ſymptoms it may be obſerved, that all diſeaſes reſulting from, or attended with, a deficiency in the quantity of the animal fluids, need for their cure ſuch medicines as are reanimating.

It may not be uſeleſs to remark the ways by which *diſeaſes* put a period to *life*. Immediately before the death of an animal body, there proceeds a ceſſation of the *reſpiration* and circulation of the blood, the moſt frequent cauſes of which are the following, viz. that inſpiſſation or thickening of the blood, which renders it unpaſſable through the extremities of the capillary ſanguine arteries, into the capillary ſanguine veins; and it is eaſy to comprehend how ſuch a thickneſs of the blood may firſt render the motion of it ſlower through the minuter arteries, and at the ſame time quicker through the larger; and then as the ſpiſſitude of it increaſes, the blood may become *unpaſſable*

paſſable from the *capillary arteries* into the *capillary veins;* the conſequence of which is a *ſtop* to the *circulation.* So in reſpect of the *reſpiration*, the inſpiſſated blood paſſing too ſlowly through the capillary ſanguine veſſels of the lungs, muſt keep them too much diſtended, and render the contractions of the air-veſicles leſs in expiration, and conſequently the reſpiration quicker and quicker, as the ſpiſſitude of the blood increaſes, till there is a total ceſſation of the action of the lungs, that is, till death; this is to be underſtood to be the way by which death happens to perſons who die under *ardent fevers;* and in ſuch caſes where the blood is coagulated, to a mortal degree, by *the bite of a mad dog, viper*, or other venomous *reptile.* And indeed a certain exceſs of *heat* will in a few minutes ſo much inſpiſſate the blood, as to render it unpaſſable from the arteries into the veins. To which I may add, that intenſe *cold* will alſo coagulate the animal fluids, and render them unpaſſable through their veſſels, and ſo put a period to life; which is the caſe of perſons frozen to death.

We may, from theſe conſiderations, learn the importance of uſing, in theſe caſes, a medicine of the nature and property of the *Reanimating Solar Tincture*, capable of rendering the circulation eaſy, when the diſeaſe is produced by, and depends on, too great a ſpiſſitude of the animal fluids.

Another immediate cauſe of death is that *conſtriction* of the *muſcular fibres* and *animal veſſels*, which is inconſiſtent with their natural vibrating motion; ſuch a *conſtriction* will immediately *ſtop* the *reſpiration*, and alſo the circulation of the blood, and ſo put an end to life; thus it is when perſons *die ſuffocated* with the *fumes* of burning *brimſtone*, or *charcoal*, or with the effluvia of any other ſubſtance that has a like ſtrong, conſtringent quality; for while *life* continues, there is an alter-

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nate *contraction* and *dilatation* or diſtention of the animal veſſels, or a reciprocal action and re-action; and that which conſtringes the veſſels ſo much as to ſtop theſe motions, does at the ſame time put a period to life. But although it is thus in theſe caſes, yet I will not affirm it to be ſo in *chronical diſtempers*, nor in any *acute diſeaſes*, except in *ardent fevers*, when the heat is ſo intenſe as to render the muſcular fibres rigid, to ſuch a degree that the veſſels cannot be dilated by the force of the blood's motion, but remain in a ſtate of contraction.

Again, that general *relaxation* of the *muſcular fibres* of the *heart* and *arteries*, and other animal veſſels, which renders them incapable of their natural *contractile* motion, will make the circulation of the blood to ceaſe; this is ſelf-evident, becauſe if the contractile motion of the heart and arteries ceaſe, the blood cannot be ejected from the *heart* into the *aorta*, nor propelled through the arteries into the veins, and conſequently will put an end to life.

This general relaxation may be produced by various cauſes, particularly by a great deficiency in the quantity of blood, and of the nervous fluid ſecreted from it; for a ſufficient ſupply of the fluid ſecreted by the cerebellum is neceſſary to keep up the ſtrength of the vital organs; and in proportion to the diminution of the healthful quantity of nervous fluid will be the abatement of vital ſtrength: and, in like manner, as a deficiency in the quantity of the nervous fluid increaſes, ſo the diminution of the muſcular ſtrength and relaxation of the veſſels will be increaſed too: for as it is by the means of the nervous fluid that the heart and arteries exert their natural contractile force, ſo when the quantity of that fluid becomes diminiſhed to a certain degree, the contractile power, naturally reſident in the heart and arteries, muſt

ceaſe, and a general relaxation of the veſſels, and death, will be the immediate conſequence.

And here it may be conſidered, that during the progreſs of diſeaſes, eſpecially of thoſe that are acute, as the quantities of the aliment taken into the ſtomach are generally leſs than in time of health, and the evacuations from the body, of one ſort or other, are frequently larger than in time of health, ſo there is daily a diminution of the patient's ſtrength; and therefore we have reaſon to think the quantity of the nervous fluid is daily decreaſing, and conſequently that death may this way be brought on; and if we examine the pulſe, we may judge how the deficiency in the quantity of the nervous fluid decreaſes, by taking notice of its weakneſs, and of the performance of the vital, natural, and animal functions. And from hence we may learn, that *cordials*, of one kind or other, become needful and uſeful remedies for the patient, in the progreſs of his ſickneſs, almoſt under every diſeaſe; this is a point worthy of conſideration, becauſe the obſervance of it is a mean neceſſary to preſerve or reſtore the ſtrength of the action of the vital organs, which is the vital indication, and neceſſary to continue the contractile power in the muſcular fibres and animal veſſels, which is abſolutely neceſſary to the continuance and duration of life.

A general relaxation of the muſcular fibres of the heart and arteries may be produced by any particles of matter diffuſed in the blood, that have a ſtrong diſſolvent quality, for theſe will deſtroy the conſiſtence of the animal fluids, and, by dividing and ſubdividing their globules, may reduce them to the minuteneſs which will occaſion hæmorrhages, or colliquative ſtools, urines, or profuſe perſpirations; and likewiſe ſo far diminiſh and weaken the *coheſion* of the component parts of

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the muſcular fibres, as that no contractile power will remain in the animal veſſels, but an univerſal relaxation of them; the conſequence of which is a period both to reſpiration and the circulation of the blood, and then death cloſes the ſcene.

Thus it often happens to thoſe perſons who have a putrid fever, attended with a feeble languid pulſe, and a diminution of the vital heat; but more eſpecially if attended with languor, hæmorrhages, or colliquative evacuations.

From theſe obſervations, it will appear neceſſary that a medicine ſhould be ſo compounded, capable of deſtroying or altering this diſſolvent quality, and at the ſame time to ſtrengthen the *coheſion* of the *component* parts of the *muſcular fibres*, and ſo preſerve the contractile power of the animal veſſels.

In all complaints originating from ſuch defects, the ſtimulating and REANIMATING efficacy of the SOLAR TINCTURE is moſt ſtrikingly manifeſted, not only in living perſons, but its powers are moſt aſtoniſhing where the Tincture is applied to thoſe who apparently have met with accidental or ſudden death.

For as life denotes the animate ſtate of nature, ſo human beings exiſt ſo long as the union of the ſoul and body laſts. With us, therefore, life continues, until ſuch ſeparation has really taken place; which can no more be ſaid to have happened during the paroxyſm of a fit, or of a blow, which for a time deprives us of ſenſation, or in the *early* period of an unnatural and ſudden death, than during the time we are aſleep. It is the want of proper ſkill at ſuch times that too often occaſions death to take place, when life abſolutely exiſts in the blood, and might with little care have been preſerved. Death is therefore the act of ſeparation of the ſoul from the body; in which ſenſe it ſtands oppoſite to life. An animal body, by the actions inſeparable from life, under-

goes a continual change, and receives its diſſolution by degrees. Its ſmaller fibres become rigid; its minuter veſſels grow into ſolid fibres, no longer pervious to the fluid; its greater veſſels grow hard and narrow; and every thing becomes contracted, cloſed, and bound up: whence the dryneſs, immobility, and extenuation obſerved in old age. By ſuch means the offices of the minuter veſſels are deſtroyed; the humours ſtagnate, harden, and at length coaleſce with the ſolids. Thus are the ſubtileſt fluids in the body intercepted and loſt, the concoction weakened, and the reparation prevented; only the blood continues to run ſlowly through the greater veſſels, aſſiduous to preſerve life, even after the animal functions are deſtroyed. At length, in the proceſs of theſe changes, death becomes inevitable, as the neceſſary conſequence of life. But it is rare indeed that life is thus long protracted, or that death ſucceeds merely from the natural decay and impaired ſtate of old age: accidental diſeaſes, and our neglect of preſerving health, cut the work ſhort.

The ſigns of death are often very uncertain. If we conſult what Winſlow or Bruchier have ſaid on this ſubject, we ſhall be convinced that between life and death the ſhade is ſo very undiſtinguiſhable, that even all the powers of art can ſcarcely determine where the one ends and the other begins. The colour of the viſage, the warmth of the body, and ſuppleneſs of the joints, are but uncertain ſigns of life ſtill ſubſiſting; whilſt, on the contrary, the paleneſs of the complexion, the coldneſs of the body, the ſtiffneſs of the extremeties, the ceſſation of all motion, and the total inſenſibility of the parts, are but uncertain marks of death having taken place. In the ſame manner, alſo, with regard to the pulſe and breathing; theſe motions are ſo often kept under, that it is impoſſible to perceive them. By bringing a looking-glaſs near to the mouth of the perſon ſuppoſed to be dead, people often ex-

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pect to find whether he breathes or not. But this is a very uncertain experiment: the glaſs is frequently ſullied by the vapour of the dead man's body; and often the perſon is ſtill alive, though the glaſs is no way tarniſhed. In the ſame manner, neither noiſes in the ears, nor pungent ſpirits applied to the noſtrils, give certain ſigns of the diſcontinuance of life; and there are many inſtances of perſons who have paſſed them all, and afterwards recovered without any external aſſiſtance, to the aſtoniſhment of the ſpectators. This ſurely ought to be a caution againſt haſty burials, eſpecially in caſes of ſudden death; for it is ſhocking to reflect, that ſome hundreds of valuable members of ſociety are annually torn from their diſconſolate families by ſome accidental ſudden cauſe, and hurried thoughtleſsly to the grave, in whom the principles of life were capable of being revived! This lamentable truth has been eſtabliſhed by the happy ſucceſs of the Humane Society, from whoſe laudable exertions ſeveral hundred perſons have been reſtored to life, who, to all viſible appearance, *were paſt recovery*. Every age and country affords ſome inſtances of perſons having been recovered, even after long lying for dead; and from the number of thoſe preſerved by mere lucky accidents, it is evident that ſtill greater numbers might be ſaved by timely pains and ſkill. Thoſe who have contemplated the ſtructure of the human machine, know that its diſſolution cannot *naturally* happen but by that gradual decay of the whole ſyſtem above deſcribed, when the veſſels are become impervious to the fluids, the circulation weakened or deſtroyed, and the vital organs no longer able to perform their office. But when their functions are merely ſuſpended by ſome ſudden ſhock, it may be likened to the ſtate of a watch ſtopped by a fall, which reſumes its motion the inſtant that injury is repaired. In the animal economy, "*the BLOOD is the LIFE;*"

LIFE *;" therefore, if its circulation be ſuſpended or deſtroyed, death follows. But if the blood can be re-agitated, and its circulation reſumed, life will, of neceſſity, be reſtored. For this reaſon, whenever any accident has happened, by which ſudden death appears to have taken place, whether by blows, fits, falls, ſuffocation, ſtrangulation, drowning, apoplexy, convulſion fits, thunder and lightening, aſſaſſination, duelling, or the

* The ſhocking caſe of Mr. Groundwater, who was moſt inhumanly murdered, on the 23d of May, 1794, by the convicts in Cumberland Fort, near Portſmouth, manifeſts the truth of this remark. The above unfortunate perſon was deputed to overlook the convicts in their working hours; when having occaſion to reprimand two of them, for misbehaviour, namely, Francis Jennison, and William Butterworth, who were under ſentence of tranſportation for life, they fell upon the unhappy man with the iron ſhovels with which they were at work, and, having thrown him down, they ſtruck the ſharp edge of the ſhovels ſeveral times into his head, whereby the cranium was penetrated, and ſo large a fiſſure made, that part of the brains hung upon the ſpade, and the reſidue fell out upon the ground, in the quantity of a double handful. They then ſtruck down one of the ſhovels on his neck, with an evident deſign to ſever the head from the body; but, ſtriking againſt the bone, it had not the intended effect. Now it is a moſt extraordinary circumſtance, atteſted by ſeveral witneſſes, on the trial of theſe inhuman wretches (who were convicted of the murder, at the enſuing Winchester aſſizes, and executed on the 4th of Auguſt, 1794) that Mr. Groundwater lived eighteen hours after he had received the above grievous wounds, and after the whole of the brain had fallen out of the cavity of the ſkull. He was entirely ſpeechleſs; but the action of the pulſe was remarkably ſtrong, and reſpiration viſibly continued during the whole of the eighteen hours above-mentioned. This was poſitively atteſted on the oath of Mr. Hill, the ſurgeon who attended him, and taken down as a moſt ſingular caſe, by Sir Nash Groſe, who tried the priſoners. This fact therefore clearly decides the long-conteſted point among phyſiologiſts, whether the ſeat of life is in the heart, or in the brain? for it evidently ſhews that the life is in the blood, ſeated in its grand reſervoir, the heart, which if ever ſo ſlightly wounded or impaired, the circulation ceaſes, and death inſtantly follows.

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like, let the unfortunate perſon be carried into a warm houſe, and laid by the fire, or put into a warm bed; let two or three table-ſpoonfuls of the Solar Tincture be introduced, as early as poſſible, into the ſtomach, and rubbed profuſely in, by a warm hand, upon the ſpine of the back, loins, breaſt, and region of the heart, and poured into the wound, if there be any; the warm ſtimulating quality of the medicine, aſſiſted by the external heat and friction, will quickly rouſe the ſtagnant blood and juices, particularly in the grand reſervoir, the heart, where rarefying, preſſing every way, and being reſiſted by the valves, it will ſwell ſo as to make replete the flaccid right auricle of the heart, which by the ſhock had become empty and at reſt; and thus ſtimulating its fibres, will put them in motion. The right auricle being thus repleted and ſtimulated into contraction, fills the ventricle, which, by this means being irritated, likewiſe contracts and empties itſelf into the pulmonary artery; and the moment this is done, the circulation begins again where it left off; and the lungs being filled by the dephlogiſticated air contained in the medicine, begin to act, and life is reſtored, provided the organs and juices are in a fit diſpoſition for it; which they undoubtedly are much oftener than is imagined. Nor is this ſtimulating action of the Tincture upon the heart at all ſurpriſing; for every medical man knows, *or ought to know*, that the heart, even when taken out of the body, if it be pricked with a pin, or hath warm water thrown upon it, will beat afreſh, and endeavour to exert its functions, though for ſome time before it had been motionleſs *. No perſon,

* There is a very curious and extraordinary phenomenon attends the heart, which, as it is known but to few, I would hereby render public; and the more ſo, as it wonderfully displays the omniſcience of the Creator.

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perſon, therefore, ought to be conſidered *dead*, until the energy of the blood is ſo far gone, that it can never again be agitated ſo as to fill and ſtimulate into contraction the right *ſinus venoſus* and auricle of the heart.

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1. There are two coronary arteries arising from the beginning of the *aorta*, or great artery, before it proceeds from the pericardium, or bag which encloseth the heart. These arteries encompass this bowel externally on its surface several times, before it penetrates the *parenchyma*; whence they take their name.

2. There are many coronary veins to answer the said arteries, for bringing their blood back through the *vena cava*, or hollow vein, to keep up a regular circulation thereof. But what is very singular and remarkable here, is, that the blood enters these two said coronary arteries, *asynchronical* to the *vena cava* in all the other arteries of the body; an odd circumstance, yet not noticed by ancient anatomists.

3. The direction of these two coronary arteries, with respect to the course of the blood through the aorta they ſpring out from, is such as greatly impedes, if not wholly stops, at a certain instant, the entrance of the blood into them, during the heart's *systole*, or state of contraction.

4. This peculiar mechanism is evident to those who consider in what a retrogade manner these two arteries arise, making very acute angles with that part of the *aorta* which is nearest the ventricle of the heart.

5. The muscular substance of the heart itself, into which the finer branches of these arteries are distributed, during its *systole*, or contraction, is so firm, by being there corrugated, as is very unfavourable to the transit of the blood at that juncture. These are the two resisting causes which hinder the blood's entering the coronary arteries at the same time that it rushes into all the other arteries throughout the body.

6. On the other hand, as the blood impelled out of the left ventricle of the heart into the *aorta*, immediately on the cessation of the impelling power, makes a considerable push back again (as is proved from the well-known use of the semi-lunar valves; and the sides of the arteries, and the hot blood with which they are replete, necessarily make some resistance to its progressive motion); this *impetus* with which it recoils on the said valves, sufficiently raises them, and gives now a fit opportunity for the blood to enter the coronary arteries; especially as the soft relaxed state of the heart, now in its *diastole*, as well as the aforesaid particular

direction

When the patient is thus far recovered, he ought to be treated with great care and tenderneſs; and ſome warm milk, wine and water, elder-flower tea, or any nouriſhing ſpoon-meat, ſhould be given to him, as ſoon as he appears capable of taking food. In ſome caſes it may be neceſſary to open the temporal artery and the external jugular, or to bleed in the arm; but this ſhould never be done if it can ſafely be diſpenſed with, as it certainly weakens the animal principle, which it is the firſt object of the medicine to ſtrengthen. Under different circumſtances, and as particular occaſions may require, the rules laid down in page 196 of my Family Phyſician, and recommended by the Humane Society, will be found of conſiderable advantage. Above all, let me intreat an anxious perſeverance in this ſublimeſt of all virtues--the attempt to recover periſhing lives. Humanity calls for it in the moſt moving accents; and

direction of the arteries themselves, so much at acute angles, all concur remarkably to favour such an entrance and transit of the blood through the muscular substance of that enlivening bowel.

7. That this is the very case, autopsy will satisfy any one; for on opening a frog, you may see the heart becomes red at the beginning of every *diastole*, or relaxation thereof, and and so continues during the whole time of its dilated or inactive state; but immediately at the commencement of the *systole*, that is, when the heart contracts, it becomes whitish, and so continues during the whole time of contraction.

8. What greater demonstration can be given than what these two remarkable proofs afford us, that the blood does not enter the coronary arteries during the *systole*, when it is propelled into the *aorta*, and all its other branches; but enters only during the heart's *diastole*, when its ventricles are dilated, and its muscular fibres are in a state of relaxation?

Of all the anatomical writers I have read (which have not been few) I never met with this piece of curiosity: only the the great Boerhaave just touches on it, in his Medical Institutes, page 88, No. 183; from which short hint I have thus expatiated, for the entertainment of those who delight in such studies.

what can inſpire a good mind with more ſincere, perfect, conſcientious, and commendable ſatisfaction, than a retroſpect of ſuch endeavours as have been generouſly exerted, and ſucceſsfully contributed, to reanimate the life of a fellow-creature, from that moſt deprecated calamity---ſudden death, with its alarming retinue of threatening conſequences to thoſe who die unprepared? ſince by thus preſerving a ſinner to a future period, perhaps a ſoul may emerge, in full maturity, to that felicity which can have no end!

To demonſtrate the reanimating power of the medicine, experiments may be made on a fowl, lamb, cat, dog, or other animal, by plunging them under water until they are apparently dead, or by piercing them through the head, or any part of the body, except the heart; by ſuffocation, or an electrical ſhock: for ſudden death, howſoever it happens, whether by drowning or otherwiſe, is much the ſame as to its effects on the vital organs; conſequently they are all to be treated in a ſimilar manner.

Upon the whole, it is evident, that by contemplating the economy and harmony of our ſtructure, both externally and internally, we may quickly diſcern a proper line of conduct for the conſervation of health, and the prolongation of life; and we ſhall alſo perceive a more auguſt view of the marvellous works of divine wiſdom in the ſtructure of the human frame, than we ſhall perhaps again find in the whole compaſs of nature. The giſt of health was evidently the deſign of our benignant Creator, in the conſtruction of our bodies; it is therefore not leſs our duty than our intereſt to preſerve this bleſſing to our lateſt moments, as the ſeaſoning and fund which gives a reliſh to all our other enjoyments. To enumerate the various abuſes of health, which take place from our earlieſt infancy, particularly among the

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rich and gay, and which are continued through the ſucceeding ſtages of modiſh life, would fill a volume. Suffice it to be obſerved, that they prevail more particularly among people who are the moſt highly poliſhed and refined. To compare their artificial mode of living with that of nature, would afford a very ſtriking contraſt, and ſupply an obvious reaſon why perſons in the lower orders of ſociety are generally the longeſt livers, and enjoy the beſt ſtate of health; and hence we are warranted to conclude, that a large proportion of the diſeaſes to which we are ſubjected are produced by our own imprudence.

Notwithſtanding this unaccountable abuſe of our health, yet we are well convinced that the want of it unfits us for moſt of the common avocations of life, and is more eſpecially an enemy to the ſocial and humane affections, as it generally renders the unhappy ſufferer peeviſh and ſullen, diſguſted at the allotments of Providence, and apt to perpetrate ſuicide, by ſuggeſting gloomy and ſuſpicious ſentiments of the Almighty. It obſtructs the free exerciſe and full improvement of our reaſon, makes us a burden to our friends, and uſeleſs to ſociety. Whereas the uninterrupted enjoyment of health is a conſtant ſource of good humour, and good humour is a great friend to openneſs and benignity of heart, enables us to encounter the various ills and diſappointments of this world with more courage, or to ſuſtain them with more patience: and, in ſhort, conduces much, if we are otherwiſe duly qualified, to our acting our part in every exigency of life, with more firmneſs, conſiſtency, and dignity; therefore it imports us much to preſerve and improve the habit of healthful enjoyment, without which every other external entertainment is taſteleſs, and moſt other advantages are of little avail.

To this end we ought, above all things, to culti-

vate prudence, temperance, ſobriety, fortitude, and equanimity of temper; for without a prudent care of the body, and a ſteady government of the mind, to guard the one from diſeaſe, and the other from the feuds of paſſion and prejudice, ſound health is unattainable. By temperance we enjoy the real gratifications of life, without ſuffering any conſequent inconvenience. Sobriety enables us to be content with ſimple and frugal fare, and protects us from the pain and diſgrace of intoxication. Fortitude enables us to bear thoſe infirmities which prudence and ſobriety cannot ſhun, and baniſhes all dread of imaginary evils from our thoughts. Equanimity of temper contributes greatly to the happineſs of life, as well as the conducement to health, by preſerving the mind from anxiety and perturbation, and arming us againſt the calumnies and animoſities of human nature. Violent paſſions, and the exceſſes they promote, gradually impair and wear away the conſtitution; whilſt the calm and placid ſtate of a temperate mind, and the healthful exerciſes of the body, preſerve the natural functions in full vigour and harmony, and exhilarate the ſpirits, which are the chief inſtruments of action. The worſt conſequences that could poſſibly reſult from a ſtrict adherence to this regimen, would be that of exterminating a ſwarm of locuſts, and of rendering the diſcovery of my Medicine of much leſs importance to the community.

It may be ſaid by the envious or intereſted individual, whoſe ſordid nature ſeeks only to ſell potions and receive fees, that becauſe this Medicine appears to be preſcribed for many diſorders, it can be good for none:—I affirm, that every complaint for which it is recommended *originates in the blood*, or in *obſtructed perſpiration*. The action of the SOLAR TINCTURE is on the blood and juices; it ſtrikes at the root of diſeaſes, and not

not barely at the branches; by which peculiar advantage it effects a cure when other medicines fail. For this reaſon the Proprietor, unwilling to withhold from the afflicted, in every line of life, the benefits of his diſcovery, has determined to render it to the public at only 7s. 6d. the ſmall, and 13s. the large bottle, duty included, with ample directions for every complaint in which it ought to be adminiſtered. A ſingle bottle will, in many caſes, perform a ſpeedy cure, when, in the ordinary courſe of medical practice, it would occupy a month, and coſt many pounds for unneceſſary attendance, and an exceſs of drugs. The POWDERS, 2s. 6d. each packet.

Sold by the Patentee and Inventor, E. SIBLY, M.D. No. 40, NEW BRIDGE-STREET, near ST. PAUL'S, LONDON; where Advice is given, either perſonal, or by letter (poſt-paid) and where Retailers of Patent Medicines are PARTICULARLY DESIRED to direct their orders.

*** For the good of the afflicted, the Doctor will anſwer all LETTERS of CASES ſent him through the hands of his VENDERS, GRATIS; otherwiſe he expects his uſual *Fee*, ONE GUINEA.

☞ It is neceſſary the purchaſers of the above Medicine take notice, that the Bottles are thus marked:---DR. SIBLY's SOLAR TINCTURE, by his MAJESTY's ROYAL LETTERS PATENT; and that each bill of directions is certified by the Doctor's ſignature in writing. He *cannot* anſwer for any other being *genuine*.

THE

DESCRIPTION OF THREE PLATES,

ACCORDING TO THEIR REFERRENCES.

The front View of the exterior Muscles, page 119.

1 Fontales.
2 Orbicularis palpebræ.
3 Zygomaticus major.
4 Nasales labii superior.
5 Depressor labii inferior.
6 Depressor anguli oris.
7 Platisma myoides.
8 Pectoralis.
9 Latissimus dorsi.
10 Serratus magnus.
11 Externus obliquus abdominis.
12 Recti abdominis.
13 Pyramidalis.
14 Linea alba.
15 Gracilis.
16 Adductor longus tricipitis femoris.
17 Pectineus.
18 Psoas magnus.
19 Iliacus internus.
20 Sartorius.
21 Glutæus medius.
22 Fascialis.
23 Vastus externus.
24 Rectus femoris.
25 Vastus internus.
26 Pars bicipitis.
27 Pars gastrocnemii.
28 Soleus.
29 Peroneus longus.
30 Extensor longus digitorum pedis.
31 Tibialis anticus.
32 Deltoides.
33 Triceps.
34 Biceps.
35 Brachiæus externus.
36 Supiuator longus.
37 Pronator rotundi radii.
38 Radialis internus.
39 Palmaris longus.
40 Sublimis.
41 Ulnaris internus.
42 Abductor longus pollicis.
43 Radialis externus longus.

The back View of the exterior Muscles, page 120.

1 Temporalis.
2 Mastoidæus.
3 Trapezius.
4 Deltoides.
5 Brachiæus.
6 Gamellus.
7 Palmoris longus.
8 Sublimis.
9 Ulnaris internus.
10 Radialis externus longior.
11 Extensor communis digitorum.
12 Infra spinatus
13 Latissimus dorsi.
14 Obliquus externus abdominis.
15 Glutæus medius.
16 Glutæus major.
17 Gracilis.
18 Adductor magnus femoris.
19 Semitendinosus.
20 Biceps cruris.
21 Vastus externus.
22 Gastrocnemius.
23 Soleus.
24 Tendo Achillis.

A View of the situation of the Thoracic and Abdominal Viscera, the Omentum being removed, page 134.

1 The larynx.
2 The internal jugular vein.
3 The subclavian vein.
4 The vena cava descendens.
5 The right auricle of the heart.
6 The right ventricle.
7 Part of the left ventricle.
8 The aorta ascendens.
9 The arteria pulmonalis.
10 The right lobe of the lungs, part of which is cut off to shew the great blood-vessels.
11 The left lobe of the lungs.
12 The diaphragm.
13 The liver.
14 The ligamentum rotundum.
15 The gall-bladder.
16 The stomach pressed by the liver towards the left side.
17 The small guts.
18 The spleen.

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