The medical works ... v. 1, containing, a popular treatise on health, and the means of preserving it / Edited by his son, W. Turnbull. To which is prefixed, the life of the author.

Contributors

Turnbull, William, approximately 1729-1796.
Turnbull, W.

Publication/Creation

London : T. Boosey, 1805.

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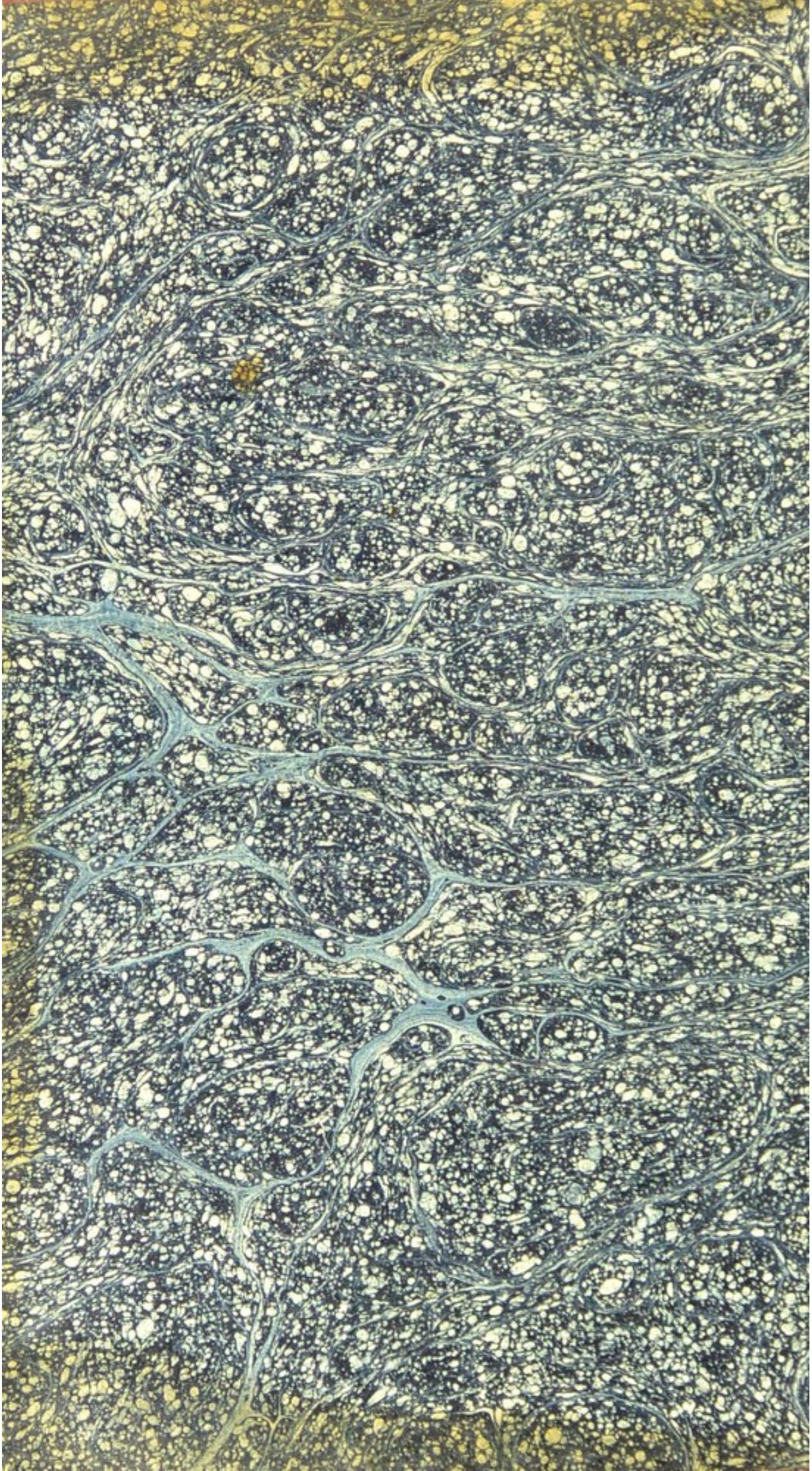

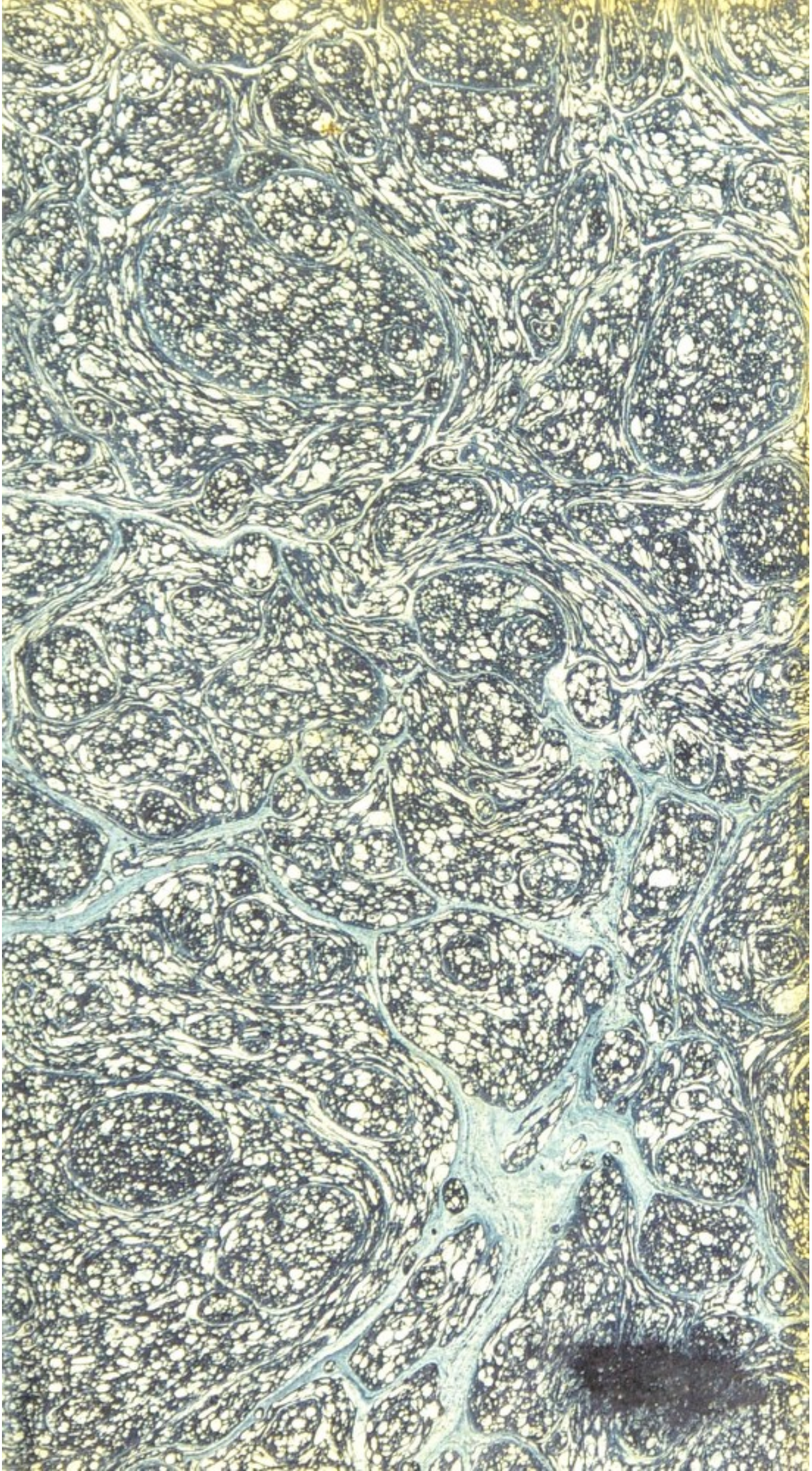

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1729? - 1796

THE

MEDICAL WORKS

OF THE LATE

DR. WM. TURNBULL,

PHYSICIAN TO THE EASTERN DISPENSARY, &c.

VOL. I.

CONTAINING,

A POPULAR TREATISE ON HEALTH,

AND THE MEANS OF PRESERVING IT.

EDITED BY HIS SON,

WILLIAM TURNBULL, A.M.

A Member of the Royal College of Surgeons, London; Fellow of the Medical Societies of London and Edinburgh; and Surgeon to the Society for the Relief of the Ruptured Poor, &c.

TO WHICH IS PREFIXED,

THE LIFE OF THE AUTHOR.

London:

Printed by C. SPILSBURY, Angel-Court, Snowhill;

Sold by T. BOOSEY, New Broad-Street; by JOHNSON, St. Paul's Church-Yard; by J. MURRAY, and by S. T. HIGHLEY, Fleet-Street.

1805.

TO

ALEXANDER DAVISON, Esq.

A GENTLEMAN

EQUALLY DISTINGUISHED FOR

HIS EXTENSIVE COMMERCIAL KNOWLEDGE AND PURSUITS,

AS WELL AS FOR

THE PATRIOTIC LIBERALITY OF HIS MIND,

FOR THE HONOUR OF HIS COUNTRY,

SO EMINENTLY DISPLAYED BY HIM,

IN PERPETUATING, AT HIS OWN EXPENCE,

BY APPROPRIATE PRESENTS TO HER BRAVE DEFENDERS,

THE MEMORIALS OF

THE BATTLE OF THE NILE,

A PROPER ENCOURAGEMENT TO FUTURE SUCCESSES OF THE SAME KIND;

THIS WORK,

The Remains of one whom he esteemed in Life,

AND WHO CONSIDERED HIMSELF HONOURED BY HIS FRIENDSHIP,

IS ADDRESSED,

BY HIS SON,

AS A MARK AT THE SAME TIME OF HIS OWN RESPECT AND ESTEEM, AS WELL AS OF THAT DUE FROM HIS FATHER.

CONTENTS.

PREFACE.

THE present Work is given to the Public as the relics of an eminent Physician, whose character in the Metropolis was well known, and who was distinguished by a successful and scientific practice. He was particularly celebrated in the popular and periodical Publications of that day, by bringing forward, in small tracts, or occasional letters, whatever he thought could be useful to the Public; and in this way he considered that he discharged a duty, without regard to professional emolument or mystery; which is, of all others, the most pleasing, that of benefiting his fellow-creatures, by gratuitous and disinterested advice. In doing this, it may be said, he followed the example of the celebrated Dr. Fothergill, who, actuated by similar motives, was

ever attentive to catch the predominant attack of disease at the time, and publicly to disseminate his opinion upon it, for the purpose of checking its progress.

The situation of Dr. TURNBULL (as noticed in his Memoirs) gave him abundant opportunities of displaying his philanthropy, both by his employment in the Public Charities to which he belonged, and also by his ready and often unsolicited attendance on the poor in his own neighbourhood, to whom he acted the part of a friend and a father.

From the pen, therefore, of such a character nothing is to be expected but what is worthy of notice, and what will be found to benefit mankind by the instruction it conveys.

The Papers which he left seem to be part of a practical System of Medicine he had planned and nearly completed for the Public eye. The first part, which forms the contents of this Volume, consists of

several subjects, which, though they have been treated of by others, yet it is not in that concise manner that distinguishes the remarks upon them from Dr. TURNBULL'S pen.

The Second Volume is meant to consist of

I. His Letters on the Diseases of Women and Children, first published in the Ladies Magazine.

II. His Essay on the Croup, addressed to his friend, the late celebrated Dr. Buchan, being a disease which he had the merit of first discovering, and his practice in it Dr. Buchan has given an account of, as it appeared in Northumberland.

III. Observations on Nervous Diseases: and,

IV. Several remarkable cases, particularly one of hydrophobia, successfully cured by him, with observations on that subject, which will conclude the Second Volume.

It will go to press so soon as the Editor's time will allow him to arrange it.

MEMOIRS OF THE LIFE

OF THE LATE

DR. WILLIAM TURNBULL.

IN publishing the Posthumous Works of an Author, it has been generally the custom to precede them by some account of his Life. This practice, which custom has sanctioned, it gives me particular pleasure to comply with, as it thereby affords me an opportunity of paying a just tribute of filial duty and affection in recording the virtues of an affectionate Father, and, what is still more important to Society, of a worthy man, whose employment and talents, during a long life, were devoted to the welfare of the community.

Dr. WM. TURNBULL was born about the year 1729, at Hawick, in Scotland, a small town on the borders of the two kingdoms, situated in the county of Roxburgh, a part of the country particularly

distinguished for its pastoral beauties, which have formed the theme of several eminent Poets, and equally remarkable at that time, corresponding with the pastoral nature of the employment of its inhabitants for the primitive character of the latter, and the simplicity of their manners.

Dr. TURNBULL was the Representative of the family of BEDRULE, a family long situated in that part of the country, and marked, from the time of the Reformation, for its strong attachment to the Dissenting interest.

Indeed, in no part of Scotland did the principles of the Reformation make more rapid progress than here; the simplicity of worship it inculcated naturally recommended it to a people whose manners were simple and patriarchal, and whose country did not afford that wealth necessary to the support and dignity of an expensive hierarchy.

The consequence of this early attention to the Reformation, brought upon many of the leading

families of this part of the country, the indignation and persecution of the then existing Government, and thus they were despoiled of many of their richest and most extensive possessions, by the influence of Papal resentment.

No family suffered more in this respect than the family of Bedrule, and from a religious predilection for Calvinistical tenets, they were deprived of their estates.

A tottering Government, such as the Scotish crown then was, could only act by crooked policy; and the artifice of its Minister was generally employed to turn the private jealousy of the border chieftains against each other, as an instrument to accomplish their own purposes.

So great was the influence of the BEDRULE family and that of the RUTHERFORDS, at that critical feudal period, that the Chief of the former, Sir ANDREW TURNBULL, was marked out by the Earl of MORTON,

at that period Regent of Scotland, as a fit person to keep in awe the powerful families of SCOTT, of Buccleugh, and KERR, of Cessford, now Duke of ROXBURGH. That he performed this part too well, cannot be doubted, from the downfall of his own family, and the present greatness of his opponents.

Dr. WM. TURNBULL, Bishop of Glasgow, and founder of that celebrated University, in the year 1450, was another respectable descendant of that family.

From this account of his family, Dr. TURNBULL could not fail to be early initiated in the strictest reformation principles.

After the usual period allotted in Scotland for classical learning at his native town, Dr. TURNBULL removed to the University of Edinburgh, at that time, and still, the most celebrated Seminary for Medical Education. Here the Doctor began his professional studies with that ardour and desire of improvement, which distinguished his character

afterwards through life. Here too he formed many of those valuable and respectable connexions, who continued attached to him, and whom he found highly useful in the after-period of his practice; here too he conceived that warm attachment for its seat of learning, which has been remarked to distinguish so many great men bred at it; a circumstance that does so much credit both to the master and the pupil.

After the usual time spent in Academical pursuits, Dr. TURNBULL entered upon the exercise of his profession, previous to which he had taken the Degree of Medicine in the usual manner.

He then settled at Wooler, in Northumberland, a populous town, surrounded by a wealthy and industrious neighbourhood. In this situation he had soon an opportunity of displaying both those professional abilities he possessed, and also of showing, what is more to his credit, that philanthropy and attention to the poor, which was one great trait of his character, during the whole progress of his

useful life. "Indeed," as Dr. GREGORY observes, "no man possessed more of that sensibility of heart which makes us feel for the distresses of our fellow-creatures, and which, of consequence, incites us in the most powerful manner to relieve them. Sympathy produces an anxious attention to a thousand little circumstances that may tend to relieve the patient; an attention which money can never purchase: hence the inexpressible comfort of having a friend for a physician. Sympathy naturally engages the affection and confidence of a patient, which in many cases is of the utmost consequence to his recovery. If the physician possesses gentleness of manners, and a compassionate heart, and what Shakspeare so emphatically calls 'the milk of human kindness,' the patient feels his approach like that of a guardian angel ministering to his relief: while every visit of a physician who is unfeeling, and rough in his manners, makes his heart sink within him, as at the presence of one who comes to pronounce his doom. Men of the most compassionate tempers, by being daily conversant

with scenes of distress, acquire in process of time that composure and firmness of mind so necessary in the practice of physic. They can feel whatever is amiable in pity, without suffering it to enervate or unman them. Such physicians as are callous to sentiments of humanity, treat this sympathy with ridicule, and represent it either as hypocrisy, or the indication of a feeble mind. That sympathy is often affected, I am afraid is true; but this affectation may be easily seen through. Real sympathy is never ostentatious; on the contrary, it rather strives to conceal itself. But what most effectually detects this hypocrisy, is a physician's different manner of behaving to people in high, and people in low life; to those who reward him handsomely, and those who have not the means to do it. A generous and elevated mind is even more shy in expressing sympathy with those of high rank, than with those in humbler life; being jealous of the unworthy construction so usually annexed to it."

The reputation which the Doctor acquired

at Wooler, soon rendered it a place of medical resort, during the summer, for those persons who wished to take the benefit of goat's whey, reckoned so efficacious in consumptive complaints, and other affections of the chest and lungs. The greater number of those patients came from the metropolis of Scotland, and were recommended to the particular care of Dr. TURNBULL, by those leading professional characters in that city, who have been so much distinguished for their reputation in medicine.

This will form the strongest evidence of the high estimation in which they held Dr. T.'s abilities as a practitioner, and the desire, at the same time, they wished to express towards him as a friend. So much did the Doctor's practice in this line increase, during his stay at Wooler, that the town became too small to receive the number of patients that annually resorted to it; and he was induced, in consequence of this, to lay before the proprietor a plan for erecting proper accommodations for the reception of invalids, and who, by being thus placed

under his immediate view, he might be enabled to attend with every advantage and chance of success. At that time it did not immediately suit the concerns of that noble family to make the proposed arrangements, and the undertaking was obliged to be dropped, to the regret of Dr. T. But so much had he paid attention to this subject, on the use of goat's whey in consumptive complaints, that a considerable number of notes appear amongst his papers, in the hands of the Editor, intended professedly for a dissertation on that subject; a work that could not fail to be highly acceptable, from his extensive experience in this line, to every medical practitioner.

During his residence at Wooler, it will be proper to mention, he was chosen Physician to the Bamborough Infirmary, a charity of a very extensive nature, which, in that part of the country, has been productive of very beneficial effects to the lower orders of the people. The estates which support it were bequeathed by Lord CREWE, Bishop of Dur-

ham, with a princely beneficence, both for the relief of sickness and distress, and also for making every exertion for preserving the lives of those who may be exposed to the dangers of the sea, on that tempestuous coast. It is only necessary here to add, that the duties of his appointment he discharged for a series of years, with much credit to himself, and equal advantage to those placed under his care.*

From the Print of Bamburgh Castle, *by* Buck. *Published* 1728.

* "The old name of this place was *Bibbanburg*, taken from Queen *Bebba*. The Castle was built by IDA, the first King of Northumberland, who fenced it with a wooden empailure; but, afterwards, being of importance to defend the northern parts against the continual incursions of the Scots, was repaired, and made a place of great strength, and always kept well manned and provided with ammunition. BRESSY, the stout Norman, in the civil wars between York and Lancaster, destroyed the beauty of this Castle, and almost demolished it: since which it hath been in a continual struggle with old age; yet the Lord of the Manor still holds his Courts Leet and Baron in a corner thereof."

From "The Reports of the Society for bettering the Condition, and increasing the Comforts of the Poor." Vol. I. Lond. 1798.

In p. 204 to 219, is given an account of "*A School of Industry for sixty Girls,*" and the manner of their being educated and

Dr. Turnbull spent at Wooler the principal part of his life, extending to a period of not less than twenty-five years; and, from his vigorous and athletic constitution, he was enabled to get through

employed. In p. 219, the worthy author of the account (the Rev. R. G. Bouyer, Prebendary of Durham) mentions also "*A School at Bamburgh for sixty Boys*;" and in a note,* gives the following account of the establishment:

* "*This School, at Bamburgh Castle*, is one of a great variety of charities, established under the will of Nathaniel, late Lord Crewe and Bishop of Durham, who died in 1722; having devised considerable estates, in the counties of Durham and Northumberland, to five trustees; charged, in the first place, with the annual payment of some noble and well-known benefactions to the University of Oxford, and to Lincoln College, of which his Lordship had been Rector; and of several sums for the augmentation of Livings, and the institution of Schools, Alms-houses, and for other beneficent purposes, in the several counties and parishes with which he had been connected; the residue being applicable to such charitable use and uses as the trustees should, from time to time, appoint and direct. This surplus was accordingly applied for various purposes of charity, as opportunity offered; but, during more than thirty years after the Testator's death, it does not appear that any *permanent* and regular system was adopted. It was about that period, that the ancient castle of Bamburgh, once the residence of the Kings of Northumberland, and situated on one of the trust estates, began to be repaired; first for the purpose of holding the Manor-Courts, and

more fatigue and exertion in professional occupation than could have been imagined. Indeed, it was a principle he laid down, not to refuse to give relief whenever called upon, whatever circum-

as a habitation for the Minister; and afterwards as the fixed seat of several charitable establishments of great extent and utility, chiefly planned by the late Dr. John Sharp, Archdeacon of Northumberland and Prebendary of Durham, who was elected a trustee, in the room of his father, Dr. Thomas Sharp, in the year 1758; from which time, till his decease, which happened in 1792, he was employed in arranging, with the concurrence of the other trustees, these plans, which he carried into execution with great zeal and promptitude, superintending every part of this administration with indefatigable perseverance; for which purpose he resided in Bamburgh Castle during several months in every year. And, in order that his successors might find every encouragement to continue these good works, he not only expended a good part of his own property, in his life-time, on the improvements and accommodations of the place, but, at his death, bequeathed to the trustees all his furniture there, and a large and valuable library, besides a freehold estate, and a considerable sum of money, to be vested in the funds, for the perpetual repair of the great tower or keep, which he occupied, and intended for their use.

"*7th April*, 1798."

[For the above communication respecting the Bamburgh Charity, the Editor is particularly indebted to GRANVILLE SHARP, Esq. whose desire to promote the interests of humanity and science is so well known.]

stances the individual might be in, or whatever distance he might be placed at. This was making his profession a real matter of conscience, and it afforded him, at the same time, numberless opportunities of giving that relief to distress, which is not to be purchased by the wealth of India. This, to a benevolent mind, must be one of the greatest pleasures."

It has been often a matter of reproach to the profession of Physic, that its brightest characters show, if not a contempt, at least an indifference for religion. This reproach, however, could by no means apply to Dr. T. Early bred, as we formerly remarked, in strict dissenting principles, he continued firm to his attachment for these through life. Such, indeed, was the worth and respectability attached to his character, by the leading men of that persuasion, a very extensive one in Northumberland, that at an after-period, when he was settled in London, he was chosen their delegate to petition Parliament, along with other gentlemen of that interest, for the suppression of the Test and Corpo-

ration Acts, so highly offensive to this great body of his Majesty's subjects, and so inimical to civil liberty.

It is not, however, to be inferred from this, that Dr. T. was either narrow-minded or illiberal in his religious views; on the contrary, he considered the mere form of worship as immaterial, and was ever ready to join in paying the proper respect to the religious opinions of others, when they arose as the fruit of conviction and purity of conscience.

Dr. T.'s constitution, though naturally vigorous and healthy, he found begin to suffer by the fatigues to which he was exposed, in his situation at Wooler. He could not bear the idea to refuse any person that applied to him, as already mentioned, and he found the task too much for him to go through. By the advice therefore of one of the first ornaments of the profession, Sir J. PRINGLE, who continued zealously attached to him during the whole of his life, he was induced to leave this favourite scene of business of his early days, and to

remove as a physician to London. The respect which he possessed in his former situation equally attended him here; and soon after his entering upon business, he was unanimously appointed Physician to the Eastern Dispensary, an institution supported by nearly six hundred subscribers, at the head of whom is that distinguished character, the Marquis CORNWALLIS.

Here he had soon abundant opportunities of showing that experience in the cure of diseases, and that nice discrimination in judging with certainty of their nature, which distinguished him in practice. During his long attendance on that charity, many remarkable cases occurred, which could not fail to add to his reputation; some of these were occasionally published by him, particularly one of Canine Madness, which was brought forward with the humane intention of proving that this malady is not entirely incurable, and that the arguments introduced by some individual, and published in one of the diurnal prints, that such unhappy patients as labour under

hydrophobia should be put to death, deserved no regard in the eye of reason, feeling, or science. It was at this period also, that Dr. T. gave to the world several of his Medical Tracts, with a view to benefit society, and particularly that they might be read in families, for domestic information. Of this kind are his Letters on the Diseases of Women and Children, first published in the *Ladies' Magazine*, which were well received at that time, and which will be republished in the Second Volume of the present Work. This practice was followed, at this period, by several physicians, particularly Dr. Fothergill, as well as the author of these Essays; and they may be considered as the first attempt at popular medicine, or that knowledge of the healing art, which, divested of professional language, is now come to be so generally diffused among the people.

In speaking of Dr. T.'s writings, it will be proper to record here the intimacy that subsisted between him and the late Dr. Buchan. Equally liberal in his views for the good of society as the latter physi-

cian, he had a pleasure in communicating whatever could be of service to professional characters. It was from this motive he first communicated his discovery of a disease very prevalent in the north-east part of Northumberland, at that time unknown, and since distinguished by the name of *Croup*. Of this disease he has written an account, first published at Edinburgh, in the year 1756, in the *Scots Magazine*. He some time afterwards sent a similar account of the same malady, with his additional experience on the subject, to his friend Dr. BUCHAN, who has taken a proper and respectable notice of it in his *Domestic Medicine*; and who, at the time, regretted only that the limits of his work would not allow him to publish this account at large. This statement, the Editor of the present Work finds it necessary, in justice to the memory of his father, to mention, in consequence of the first discovery of this disease being assumed by Professor HOME, of Edinburgh, as his own, although Dr. T.'s letter on that subject, appeared a few years before. We must not omit here, in speaking of Dr. T.'s literary character,

to state that he was Editor of the medical part of *Middleton's Universal Magazine,* a work at that time much respected.

From this view it will appear, that besides his useful professional avocations, his mind was eager to seize every opportunity of employing his pen on subjects of utility, and such as were calculated for the best instruction of society. In his mode of practice, like the other parts of his character, he discovered a vigour and decision, which was often attended with the best effects; never wishing to amuse the patient, or to try the powers of uncertain or trifling remedies; he endeavoured to attack the disease by the most powerful and energetic medicines, which were suited to subdue it. And perhaps no man was more fortunate, in being equal to give a sure prognostication of the event of any malady that came under his investigation. This certainly, more than any other part of his profession, marks the knowledge and abilities of the practitioner; and, for this happy talent, he was very much distinguished at the Charity he superintended.

Such is the account that it has been thought proper to introduce of Dr. T.'s public character, and it would be improper to close it without entering more fully into his disposition as a man; a subject that cannot fail to please every reader of his Works, and which will give the highest satisfaction to those who had the knowledge of his acquaintance. One of the chief traits of his disposition was a certain equanimity of mind, or evenness of temper, which fitted him very much for the exercise of his profession. Patient to the tale of distress, he never was in a hurry to dismiss the visit of a patient; and by this he both rendered himself master of their situation, so as to afford them effectual relief, and also he gained, at the same time, their confidence and good opinion.

He justly considered, according to Dr. GREGORY'S observations, "That a patient is entitled to the whole attention of his physician, while he remains with him. Whatever other business or avocations he may have, he should dedicate that

time entirely to him. That continual hurry which some of our profession seem to be in, is sometimes mere affectation; but it often proceeds from other causes. Some keep themselves constantly embarrassed by a want of œconomy of their time, and a proper arrangement of their business; some, from a liveliness of imagination, and an unremitting activity of mind, involve themselves in such a multiplicity of pursuits as cannot be overtaken. But, from whatever source it arises, it ought to be timely corrected, and not suffered to go into a habit. It prevents a physician from doing his duty to the sick, and, at the same time, weakens the patient's confidence in him."

The command of temper which Dr. T. possessed, gives a physician every advantage in his professional character. "Sudden emergencies occur in practice, and diseases often take unexpected turns, which are apt to flutter the spirits of a man of lively parts and a warm temper. Accidents of this kind may affect his judgment in such a manner as to unfit him for

discerning what is proper to be done, or, if he does perceive it, may nevertheless render him irresolute. Yet such occasions call for the quickest discernment, and the steadiest and most resolute conduct; and the more, as the sick so readily take the alarm, when they discover any diffidence in the physician. The weaknesses too and bad behaviour of patients, and a number of little difficulties and contradictions which every physician must encounter in his practice, are apt to ruffle his temper, and consequently to cloud his judgment, and make him forget propriety and decency of behaviour. Hence appears the advantage of a physician's possessing presence of mind, composure, steadiness, and an appearance of resolution, even in cases where, in his own judgment, he is fully sensible of the difficulty."

Although Dr. T. was distinguished for a strict sense of religion and moral rectitude, he by no means carried this into the world with any appearance of reserve or austerity; on the contrary, he was ever ready to join in conviviality, and even to introduce

gaiety and good-humour into every society in which he formed a part.

Indeed, it may be observed, that "men whose minds have been enlarged by knowledge, who have been accustomed to think, and to reason upon all subjects with a generous freedom, are not apt to become bigots to any particular sect or system. They can be steady to their own principles, without thinking ill of those who differ from them; but they are impatient of the authority and control of men, who would lord it over their consciences, and dictate to them what they are to believe."

"There are, besides, some peculiar circumstances in the profession of a physician, which should naturally dispose him to look beyond the present scene of things, and engage his heart on the side of religion. He has many opportunities of seeing people, once the gay and the happy, sunk in deep distress; sometimes devoted to a painful and linger-

ing death; and sometimes struggling with the tortures of a distracted mind."

Although Dr. T.'s life may be considered, in the whole, as having been very fortunate, some domestic occurrences took place, which showed his philosophy and fortitude in an eminent degree. He had the misfortune to see his eldest son, whose urbanity of manners, and accomplishments as a scholar, had rendered his society much courted among the circle of his friends, fall a sacrifice, in the prime of life, to a lingering and painful illness, which he had caught by sleeping in a damp bed at Tunbridge; this brought on a paralytic disorder, under which he languished three years previous to his death.

At the age of sixty-seven, Dr. TURNBULL, though his constitution remained still strong and vigorous, was suddenly attacked by a short and severe illness, after having spent the evening before with a select party of his friends, among whom was the late Dr. BUCHAN.

This illness, in opposition to the united abilities of some of his most eminent friends, viz. Dr. Saunders, Dr. Lettsom, and Mr. Cline, continued rapidly to gain ground; and, sensible of its approaching fatality, he prepared, with the natural patience and resignation of his temper, to meet his dissolution with that manly fortitude that supported him in life. His complaint proved fatal, in the space of thirty-six hours from the time of its attack; and his friends became thus deprived of a most useful member of society, an attentive and valuable friend, and, in one word, a truly honest man.

INTRODUCTION.

GENERAL REMARKS ON THE PRESERVATION OF HEALTH.

THAT health is the first of sublunary blessings, is a fact universally admitted; but this fact, however impressive, seldom produces that conviction on the minds of individuals, which shews an influence in regulating their mode of life.

To preserve health, it is necessary to live under the habitual impression of our constant propensity to disease, and to conduct ourselves with a due attention to this important truth. Few people can appreciate properly the value

of health till they experience the attack of disease; and it is only from the loss of this first of blessings, we begin to put a proper estimation on the possession of it. But though actual disease does not take place, there are, with every individual, certain slighter deviations from the healthy state, which, if neglected, undermine the constitution, and bring on irreparable mischief before we are sensible of its approach. It is these gentle warnings it behoves us to attend to, which, like enemies in ambush, insidiously push on, till they terminate in the irreparable loss of health, and in the breaking up of the habit. Hence, it is much easier to preserve health, than to recover it when lost.

The principles, indeed, of the healing art, or that which regards the preservation of this blessing, are as clear and certain as its maxims are easy to be put in practice. The

principles, again, of medicine, or what respects the cure of actual disease, are often as obscure and ambiguous, as its rules are painful and disagreeable. One simple maxim is always to be kept in view, that health is preserved by avoiding every thing that is hurtful, and by adopting that which is salutary. But, however simple this view is, no subject is of so much importance as that which regards its preservation: and it cannot be too often inculcated, that even a temporary loss of it often lays the foundation for disagreeable consequences during the remainder of life.

Health, if defined, we may consider as consisting in the corresponding harmony of each part of the body with another, and this harmony extended equally to the solids and the fluids, so that a proper balance or preponderance continues to be supported between them. This forms the perfect state of the animal economy;

and, during this state, the functions of both body and mind are performed with pleasure, satisfaction, and alacrity. When this is altered, disease ensues; and then what avail all the other advantages of life?—Can enjoyment be experienced in the act of suffering? or what consideration can be made of fortune, honour, and dignity, by him who is sensible only to his existence by the torture he feels?

But that an attention to health may be, in the opposite extreme, carried too far, will be also readily admitted; and perhaps forms an equal fault. Hence, to live *medically*, as has been alleged, is to live miserably, and to be the constant slave of rule. Yet, even as an apology for this fault, it may be observed, that the enjoyment of a few years in the unrestrained manner in which the libertine wishes to enjoy them, is purchased with an age of pain and infirmity for the remainder of life.

The true plan, therefore, consists, as wisely established by the Author of Nature, in regulating and keeping under controul our various appetites and passions; and, by doing this, united with a proper knowledge of his constitution, every man will taste that tranquillity of mind and soundness of body, which is the source of a refined pleasure that a life of intemperance can never experience.

To the preservation of health, the *Golden Mean* equally applies, as to other important pursuits in life; for an attention to health may be carried so far, as already hinted, that it degenerates into weakness. Thus, however proper the system of the noble Venetian, Cornaro, might be in his particular case, and with the infirm and worn-out constitution which gave rise to his precepts, it is by no means a plan to be generally adopted, or to which mankind in general are disposed to submit. The human

frame, we know from daily observation, is adapted for great variety, and can endure equally the scorching heats of the Torrid Zone, and the chilly freezing colds of the Polar Circles.

Man is more injured by himself than by any external agent, or circumstance of situation in which he is placed; and the principal thing required is to guard him against the evils which attack equally the energies of his mind and body, from the refinements of modern life. These are the snares he is to beware of, the syrens, whose poison saps the foundation of his frame; and, avoiding these, by temperance, moderation, and exercise, let him so regulate his mode of life, as to be always able to enjoy, in the happy language of the Poet,

"The *feast of Reason*, and the *flow of Soul.*"

Before entering into any minute details of what is proper for the preservation of health, a preliminary part is, to ascertain and be well acquainted with the signs of this state. Thus, we shall be best able to fix our proper mode of life, when we can judge of its effects, or to change it, if these effects induce a disposition to disease, instead of preserving the marks of health.

In order to enjoy a perfect state of health, it is first necesary that the principal organs of the body be completely formed; and these are confined to the head, chest, and belly. This makes what is termed a *sound constitution:* That is to say, the bones should be thick and strong, the teeth good; there should prevail a greater proportion of flesh than of fat; the head should be of a proper size; the chest capacious and open; the belly a little protuberant; the muscles thick; the vessels large; the

nerves solid, compact, and extensively diffused; the tendons firm, and the fibres in general elastic; the appetite neither too great nor too small, and the secretions and excretions performed in due proportion to each other. To these signs are to be joined the absence of all pain, the sweet uninterrupted enjoyment of sleep for the usual stated period, and the capability of supporting moderate exercise with ease, and without inconvenience.

In enumerating these various signs of health, it is not intended here to alarm those in whom they do not all observe the uniformity described. There is an infinite number of shades and deviations from perfect health to an actual assailment of disease, in which every one experiences the enjoyment of existence suited to his particular constitution or temperament; but, by this picture now drawn, every one will be enabled to judge of the slightest derange-

ments in their habit of body, by which they may come to be remedied before they arise to the height of actual malady.

Indeed, it cannot be too often impressed, that it is easier to prevent than to cure; and the words of the Poet contain, on this point, an important truth:

Principiis obsta: serò medicina paratur.

OVID.

Th' attack resist: too late the cure may come.

*** *There not being time to get a small Engraving finished, which was obligingly given by* A. Davison, *Esq. to the Editor, as an ornament to this Work, a Copy of it will be afterwards transmitted to each Subscriber, who will be pleased to accept this Apology in the mean time.*

ON HEALTH,

AND

ON THE MEANS OF PRESERVING IT.

CHAP. I.

OF THE DIFFERENT CONSTITUTIONS AND TEMPERAMENTS OF MANKIND.

THE constitutions of mankind we find considerably varied; and, speaking in general terms, no two persons are formed so exactly alike, that the same precepts inculcated will equally apply, or the same means of cure be

alike successful under disease. This mode of proceeding, however, is commonly pursued by empyrics: but, the regular and cautious observer of nature, before laying down his regulations for health in any particular case, examines with care the distinctions of habit in which each individual coming under his review differs from another; and on those differences or minute distinctions, he founds his scientific and successful plan of treatment.

Arrangement of Temperaments.

These distinctions, though numerous, have been arranged by physicians under certain heads or leading points; and, by this arrangement, the various constitutions or temperaments of mankind have been classed under four denominations, known by the names of the *Sanguine*, the *Choleric*, the *Phlegmatic*, and the *Melancholic*.—In each of these denominations we are to observe, that a certain difference

or varied proportion exists between the solids and fluids, which gives a peculiar change or modification to the movements of the habit or system. The particulars of these modifications we shall now examine, in the order in which they are placed.

1. *Sanguine Temperament.*

The first, or Sanguine temperament, is distinguished by the excess of fluid compared with the proportion of solid parts. Thus the vessels being replete with blood, it possesses a strong disposition to inflammation from the slightest cause, and it is seldom able to endure much heat. It is marked also by much sensibility and irritability. It is variable in all its motions: fickle and unsteady in every thing it undertakes, prone to suspicion, affable and courteous, but equally forgetful and unkind. It may be termed properly the *Temperament of Pleasure.* It is fond of every thing volup-

tuous, and, hating industry and application, it makes little progress for the most part in any art or science, unless where it is joined with a mixture of the next constitution, or the Choleric.—The Sanguine may be considered as the temperament which partakes, more than any of the rest, of a state of sound health, or serenity of mind.

2. *Choleric Temperament.*

In the next, or Choleric temperament, there prevails a yellow tinge of the skin. The hair is red or inclining to that colour. The eye is dark and of a penetrating cast. Every action here is denoted by rapidity. This constitution possesses an excess of bile, and the body is generally distinguished by a relaxed state. Great strength of mind characterises it, and it is fitted for the most laborious employments. It is no less the seat of magnanimity; and seems to have, as it were, the sway of

others.—In diet, a fondness for animal food is a leading feature of this constitution.

3. *Phlegmatic Temperament.*

The next temperament in the order of arrangement is the Phlegmatic one, distinguished by the softness and whiteness of the skin, and a large prominent eye; by a weakness of circulation as denoted by the pulse, and by a general slowness and languor in all its actions.—Indifference and apathy are also its leading characteristics. Prone to obey, it seems born to submit to every oppression; and so much in every respect does this tameness prevail, that even its health seems little injured by exposure to weather.

4. *Melancholic Temperament.*

The last temperament is the Melancholic. Here we observe a gloomy countenance, a dry and meagre fibre, a hard or tough skin, with

eyes small and hollow. The action of the system is weak and languid, and there prevails in the blood an excess of black bile, which renders the motions of the intestines particularly slow. The mind, however, is quick in its perceptions, and is much given to contemplation and deep research. A slowness of decision marks the execution of whatever it undertakes; and to the evils of life it yields with patience and submission, though it discovers at the same time a vindictiveness of temper when once provoked.

General Remarks on Temperaments.

Such are the differences to be remarked in the constitutions of mankind, and their differences have been referred by authors to various causes.

The first cause to be noticed is the *different state of the Nervous System* in different indi-

viduals. Thus, when the nerves are large and strong, and the brain bears a similar proportion, that constitution will possess much sensibility, and all the qualities of mind connected with it; which is the actual state of the nervous system both in the Sanguine and Choleric temperaments. Where, on the contrary, the nerves are small, and the brain contracted in the same degree, a state of mind will exist correspondent to this formation; there the senses will be dull, and a languor prevail, and even a degree of melancholy in every action. Such a state of the nervous system is found to distinguish both the Phlegmatic and Melancholic temperaments. Thus, while the Sanguine and Choleric habits readily receive impressions, and as readily transmit them with rapidity to all parts of the body, the two latter constitutions are with difficulty acted upon, and the effect of the impressions they receive is but slowly conveyed to every part. The consideration of

these circumstances requires particular attention in the practice of physic; for too much caution cannot be shown in the exhibition of powerful medicines to the two former constitutions. The worst consequences have accordingly been known to follow their administration here in too large a quantity. It is in the two latter habits this caution would be misplaced: the dull arid state of the nervous system renders it here equally difficult to affect them by the most powerful medicines, as it is easy in the former; and the most liberal doses may be, therefore, ventured upon without much danger.

The second cause of different temperaments may be referred to *Difference of Irritability*, the peculiar inherent property of the muscular fibre. Thus in the Choleric, the muscular fibres are excited to action by the slightest stimulus, while in the Phlegmatic, the muscles contract but slowly, and are only brought into exertion by the most powerful means.

Nor does the state of the component parts of the fibres and membranes affect the temperament less than the causes enumerated. For where they are remarkably soft, as peculiar to two of the habits, they are less easily exerted than where, as in the Melancholic, they are hard and dry, which increases both their tone and facility of contraction.

Even the proportion and nature of the blood has a manifest influence on the constitution; and a highly assimilated blood, by its greater stimulus, will render the exertions of the solids stronger and more violent.

When these several causes are maturely taken into review, though an original and unalterable predisposition to the temperament takes place, as already pointed out and described, yet it is clear, in the course of life, from the action of these causes, the temperament, though not

fundamentally changed, may be considerably modified; and this modification arising from different circumstances, the latter fall next to be taken into consideration.

The first of these circumstances apt to modify the constitution or temperament in the course of life, is a *Difference* of *Regimen*. Hence we find a free use of animal food, by exerting the body in the highest degree, and imparting, as it were, an unusual stimulus and excess of vigour to it, occasions all the senses to be proportionally enlivened, and even a degree of ferocity to prevail, which is a leading feature of character in all the carnivorous animals. In the same proportion vegetable food diminishes the action of the system, and lowers also its irritability and sensibility in a corresponding degree.

The second circumstance possessing this con-

stitutional influence, is *Education*. Indeed, at the earlier periods of life, it is plain its effects cannot fail to be extensive in modifying the habits and manners of man; and it must ever have considerable power over the mind, or the thinking part of the system, which will thus communicate itself to the corporeal part.

The third circumstance, and a very leading one, is *Climate*. Thus, the warm climates naturally produce an acuteness and sensibility in their inhabitants, while the cold and foggy regions are generally found the abodes of dullness and insipidity. It is from this fact the Greek proverb justly arose, of applying the character of being born in Bœotian air as a mark to denote stupidity, from the moist inhospitable atmosphere of that country.

The next circumstance is the *Fortune* of the *Individual*. Every one is sensible what a dif-

ference the enjoyment of luxury must make on the habit, compared with the opposite state, where it is harassed by the evils of life, and pressed by the hard gripe of poverty.

The last circumstances that claim enumeration, and which may be comprised together, are, the *Age*, *Society*, and *Profession*. That each of these has a considerable influence, cannot be doubted. So strong indeed is the influence of the first, that we find the dispositions of the Sanguine and Choleric, as age advances, gradually decline. The second has no less, from its particular effect in modifying the disposition and manners; and the third is equal to the other two: for it is a common observation, that the life of a dancing-master is protracted to a late period, while that of a groom is the reverse, though both, it must be admitted, are employed in active exertions. Professional diseases also, which are so frequent with artificers, show the

leading power of this circumstance over the state of the constitution.

Such is a short sketch on the subject of Constitutions or Temperaments, which has been so largely treated by physicians. It is clearly one on which every individual, anxious for his health, ought to bestow the fullest attention, and to be able himself to distinguish the leading features of his own constitution or habit. By this knowledge he will be enabled to regulate with precision his mode of life, in such a manner as to avoid, on many occasions, the causes of disease, and by this knowledge he will likewise be well acquainted with what diseases he is most liable to be attacked.

CHAP. II.

OF THE NON-NATURALS.

THIS is a term applied by physicians to express a number of things essential to the existence of man, without entering into his composition, or constituting a part, as it were, of his nature. They are properly comprehended under *Air, Aliment, Exercise, Rest, Watching,* and *Sleep,* the *Secretions* and *Excretions,* and the *Passions* and *Affections of the Mind.* On each of these it will be proper to descant so far as they influence the constitution of man in producing a state of health and disease.

1. *Of Air.*

The first and most important of the whole is Air; for while life can be supported for some time without aliment, existence terminates rapidly when we are deprived, but for a few moments, of air.

From our first entrance into the world, its presence becomes an essential requisite to the continuance of life. The action of respiration begins, the lungs are expanded, and continue their functions till death.

General Composition of Air.

This fluid, which we inhale, formerly considered as simple and uncompounded, modern chemistry has been able to analyse, and to investigate its principles. This analysis shows that air, though colourless, transparent, compressible, and elastic, as we find it surrounding our globe, under the name of atmosphere, is composed of three different substances: of *Oxygen*, *Azote*, and *Carbonic* acid, in different proportions; the first being twenty-seven parts to the hundred, the second seventy-two or seventy-three, and the last only one part. The first of these substances, or oxygen, is that best suited for the support of life; and where it is

procured pure, or by itself, by an artificial process, an animal enclosed in it will support its existence seven or eight times longer than when enclosed with the same proportion of common air. Its use is therefore apparent, and it is by the proportion of this substance in common air that we are enabled to breathe. Hence, atmospheric air, the more it is deprived of this part of its composition, the less is it calculated to sustain animal life.

The second substance, or azote, termed in common language *foul air*, is that part of the atmosphere which is produced by the various processes of vegetable and animal bodies going on near the surface of the earth by combustion, respiration, and putrefaction. Hence it is a substance which cannot be breathed without affecting the springs of life, and paralyzing the sinews of action. When accumulated in undue proportion, it proves quickly fatal to every animal exposed to its influence.

The third substance, carbonic acid, more commonly termed *fixed air*, is equally pernicious to animals as the former; but, as its quantity is so small, bearing a proportion of only one part in the hundred, we are less exposed to its deleterious effects, and therefore, on that account, it claims here less consideration.

General Effects of Air.

From this view of the composition of air, we are enabled to judge what part of it is eminently necessary to the preservation of life; and after our knowledge of this constitution of the atmosphere, we are led to examine, next, the influence that different states of it have upon us in respect to health. Thus, by a warm air the solids of the body are relaxed, and a stronger circulation of the fluids produced. The nervous system is particularly oppressed by it, and nervous habits suffer much distress

and inconvenience in hot weather. Cold, on the contrary, imparts to the solids an unusual firmness and compactness. The muscles become more elastic. The digestion and assimilation of the food are quickened, and proceed more rapidly. But, with these good effects produced on the body by the influence of cold, a proneness to disease is apt at the same time to arise, and a strong tendency to inflammation is one immediate consequence of the increased vigour and tone thus communicated. Hence, all those complaints which are connected with a powerful excitement of the system readily appear, and winter is the scene of their attack. Damp or moist air produces an equal relaxation and debility as warm air; but, it is still more hurtful, by giving a tendency to obstructions, and by checking the discharge from the skin. It has also a powerful influence on the mind, in producing depression, torpor, and *ennui*. Dampness, though increased in its effects by

cold, is still more hurtful when aided by heat, especially where the degree of heat is very great. It is from this source proceeds the mortality of the West-India Islands, where heat and moisture in conjunction form the predominant cause of disease. A dry cool air is the most conducive to health. It produces a serenity and activity both of body and mind. If the degree of coolness, however, be too great, it disposes, as already observed, to inflammation; and if it be too warm and dry, it is apt, in the other extreme, to enervate and debilitate the system. Great and sudden vicissitudes or changes of atmosphere are highly injurious both to the healthy and invalid. The human system best accords with gradual and progressive alterations, and all sudden changes are prone to induce disease. Thus, exposure to a cold coming after a warm day, is sure to produce symptoms of disease in the invalid and infirm, and should be carefully avoided,

even by those in more vigorous health. On the whole, the best situation for the human frame is that where it enjoys an atmosphere moderately heavy and elastic, being neither that rarified air found in the more elevated regions, as in mountainous countries, nor that dense thick atmosphere which hovers over low marshy grounds. By attending to these observations, every one will be best able to choose his own situation, and to guard against all the inconveniences and dangers that arise from the existence of a too pure or too loaded atmosphere.

Modifications of the Air.

From the composition and general effects of air, we proceed next to examine some of its modifications.

Winds may be considered as strong concussions or motions of the air, and when irregular,

arise from different causes; as the situation of the quarter from which they blow, the position of a mountain, a forest, and other collateral circumstances.

Of the different winds, the north wind is esteemed the most healthy. By it the atmosphere is freed of noxious exhalations, and the air rendered dry and serene. Hence, it imparts to the body colour, vigour, and elasticity; though from its degree of cold it is apt to be chilling for the invalid, and to those subject to pulmonic affections, or diseases of the chest, and other species of inflammation.

In opposition to the north wind, comes the south, which, on the contrary, weakens and relaxes, being, in this country, loaded with moisture, which tends to give rise to colds and catarrhal diseases.

The west wind, of the whole, conveys the

most agreeable sensations, though it is less bracing than the north or north-east.

The east wind in Britain produces feelings more unpleasant than any other, and that feeling does not arise merely from its degree of cold. To such a height does it often take place, that even the most cheerful disposition is rendered, by a long continuance in it, peevish and morose. It is also well known that persons having once experienced the attack of intermittent fever or ague, from their unpleasant feelings, can prognosticate at all times its approach.

To conclude our observations on winds, as they regard health, it may be remarked, that a west wind, or rather north-west, is both the most salutary and the most agreeable; and after it, they may be arranged in the following order, viz. first, an east, then a north-east, and last of

all in the scale, a south and a south-east. But, at the same time, when stating these general effects, it is to be observed, that local circumstances essentially vary these several qualities of the different winds. Thus, if they blow over a continent, or the ocean, or over high mountains, or icy regions, they will be rendered colder and more humid than if they take their direction from another quarter. In every situation, however, the morning wind is to be considered more bracing than that of the evening, which brings with it always some portion of dampness and moisture.

Climate.

To this head of air and situation, belongs properly the consideration of climate. Climates may be divided into three, the *warm*, the *temperate*, and the *cold*. The first, seated between the tropics, forms what it is called the Torrid Zone. Under this climate the heat

is always excessive, and often indeed unbearable, particularly when the sun passes perpendicularly over these regions.

The temperate climates include that space which extends from the Tropic to the Polar circle. Here the heat is more supportable, and lessens in a gradual proportion as it approaches the Circle, so that a great variety prevails in the climate of the countries included within this division.

The cold climates are those placed at the two extremities of the globe; a dreadful situation for their inhabitants, where the sun for months never shows itself in the hemisphere, where the earth is covered with perpetual snow, and the sea with ice; for, every thing here in a fluid state becomes immediately solid, and the degree of cold too often benumbs at once the springs of life.

It is only in the second division, or the temperate regions, that a variety of climate may be said to prevail, and this variety may be said to be increased by the gradual change or return of the seasons.

Seasons.

Of the four seasons, Spring is indisputably the most healthy, as well as the most beautiful of the year. It is then that the vegetable kingdom is renewed. On this account there is collected a greater proportion of oxygen or vital air, and of course the atmosphere is rendered purer than at any other time of the year. It is also the most temperate, being neither too cold nor insupportably hot. It is the season whose charms are oftenest painted by the poet, and the perpetual continuance of which is considered as constituting a part of the supposed happiness of Elysium.

Summer is neither the most agreeable nor the most healthy of the seasons. Its too great heat, by enervating, deprives us, as it were, of a part of our existence. The beginning of this season has been remarked as most salutary to children or young persons; but, as it advances, in consequence of the excessive bodily discharges it occasions, it gives a tendency to diseases of the putrid kind, and the most fatal epidemics are found to make their appearance at this period.

Autumn, the next season, is still more unhealthy than Summer; but, the beginning of this season and the latter end of Summer, are allowed to agree well with the infirm and aged. Besides, from its degree of heat, the autumnal season is rendered unhealthy, and has its atmosphere vitiated by the corrupted and putrefied particles of vegetation which then every where cover the soil; and, unless this is coun-

teracted, as sometimes happens, by frequent winds and some degree of cold,—fever, dysenteries, and diarrhœas of the worst nature, occur at this period of the year.

Winter is considered as equally healthy with the Spring, when it is not too intense, and when the changes from frost to thaw do not happen too suddenly. It is in this season that inflammatory affections mostly prevail: every precaution, therefore, should be taken to avoid any unnecessary exposure of the body, either by neglect of warmth of dress, or by long continuance in an exposed situation.

Domestic Situation for Health.

Such are the leading observations that occur in the various constitutions of air, and on the circumstances of climates and seasons, as connected with the atmosphere: it now remains to point out, as a practical inference from the whole,

the particular situation which every individual ought to prefer for his residence, where a choice is left to him, in any climate to which the chance of his fate may rivet him. Such a situation ought to be in an open dry country, on a healthy soil, and rather a rising ground. Neither should it be exposed to the extremes of winter cold nor of summer heat, but so placed that the latter may be moderated by a free pure air, and the solar rays admitted, so as to temper the rigour of the former. The apartments of this dwelling should be formed of a proper size and height, to admit freely, at all times, a circulation of air. To enjoy such a residence with comfort, the apartments having a southern exposure should be inhabited in winter; and in summer, on the contrary, those situated to the north and east; and through the day no person should live in the room set apart for sleep; but such apartments should be regularly opened, and the bed and bed-clothes turned over, that the

exhalations from the body imbibed during the night, may be dissipated before the return to repose. The use of *fire* in sleeping apartments is also to be condemned; and in damp weather if a fire is found necessary, it should always be removed before the hour of retiring to rest. From these few leading rules every individual will be enabled to know, in the choice of his domestic residence, what he ought to avoid, and what he ought to prefer.

2. *Of Aliment.*

The second of the non-naturals, viz. Aliment, is a subject of as much importance as the former. By this term is understood whatever is taken into the stomach, and passes of course into the system, for the purpose of nourishment, or for the support of the body; and, in common language, this we know by the name of food and drink. All substances under this denomination must undergo a certain preparation

before being received into the system. Thus, they are first taken into the mouth, and there divided by the action of the teeth and muscles of the jaws. By this operation, named mastication or chewing, they are broken down and mixed with a certain quantity of liquor or saliva before they pass into the stomach. Even in their descent into that organ some additional fluids continue to be pressed into and blended with them; and, on their arriving there, they become thinned with the gastric juice, a peculiar liquor, secreted from the stomach, which is the most powerful solvent of all elementary matter. After experiencing their necessary changes in this organ, by its action, they are transmitted next to its under orifice or the pyloric, where they pass out to the intestines or bowels; and here, in their course, they meet with the bile and various other secreted fluids. In this progress the different parts of the aliment are separated. Those proper for the nourishment of

the system are taken up by certain vessels called lacteals, and converted into a thick milky liquor termed *chyle*, which collects into one reservoir, the *thoracic duct*, from which it is conveyed into the blood, and thus distributed through every part, for the nourishment and support of the body. The remainder of this aliment, not fit to be converted into chyle, passes onwards through the long circuit of the bowels till it comes to be discharged in a useless and effete state; and along with it is discharged from the body also, part of the secreted fluids which have been employed in making the requisite alteration upon it, and in effecting the separation of its different parts.

All aliment consists either of a vegetable or animal nature. Vegetable aliment, it is probable, was the first food of man, in the choice of which it follows, he would be originally led to taste and smell, and afterwards

directed to it by experience. At that period the salubrity of aliment would not enter into his review; neither, perhaps, did the simple life of nature require it: but, as refinement took place, and a deviation from this first order of things proceeded, animal food, from observation perhaps of the carnivorous tribes, would come to be introduced by him, and we find accordingly, that even a variety of it became very early a principal support of life.

We shall first then consider the several subjects of food, and then descend into the particular kinds of it.

The first object in all aliment is, the degree of its nourishing quality; and as animal food furnishes this in the greatest proportion, it is more fitted than the vegetable for the support of man. Animal food admits also of a greater variety than any other; but, in proportion to

this variety, it is apt to induce noxious effects. Vegetable food, though it contains less nourishment than the former, makes a proper mixture with it to counteract these hurtful consequences. The particular effects of this difference of aliment on the human body, we have an opportunity of contemplating in the habits of certain votaries who exclusively use each. Thus, those tribes, as the Tartars, who live solely on animal food, possess a degree of ferocity of mind, and fierceness of character, which form the leading feature of all carnivorous animals. Besides producing this state of mind, animal food also disposes the fluids strongly to putrefaction. Even a disagreeable smell is emitted from the body of those who solely use it, and all the secretions partake of the same effluvia.

On the other hand, an entire diet of vegetable matter, gives to the mind a gentleness, soft-

ness, and mildness of feeling, the reverse of the former character, as appears in the Bramin and Gentoo: and this habit of body is less subject to diseases of a putrid nature. A mixture of diet is, therefore, best suited to the human constitution: though the proportion of this mixture cannot be very minutely ascertained, yet two-thirds of vegetables to one-third of animal food will form the best and most salutary regulation of diet.

The importance of attention to diet cannot be too strongly inculcated: and all the errors committed, in regard to its quantity or quality, must be productive of very serious evils to the human frame.

With a small quantity of aliment the operation of digestion will always be most active, and the proper changes of the food in its conversion into aliment will be also most fully

completed. On the other hand, where an excess of quantity is introduced into the stomach, the organ becomes over-loaded, the gastric juice is not in sufficient quantity to prepare it, and part will accordingly pass off in an undigested state.

But, if this attention to quantity be at all times necessary, it is indispensably so in infancy and the early periods of life; for it is then that indigestion lays the foundation for many diseases. Indeed, most of the complaints of childhood may be referred to this source. At the same time, while excess in quantity is thus condemned, it is proper that nature should be satisfied; and where too little nourishment is taken, we feel as much indisposed as by the opposite extreme.

In the quantity of food also much should depend on the particular situation of the indi-

vidual. The hardy, active, and laborious, require, it is evident, a quantity which will by no means suit the weak, sedentary, and inactive. Even the quality should be regulated by the same circumstances. Thus, the hardy and vigorous countryman stands in need of a crude and solid food, in order that the strong powers of his stomach may have proper exercise, and that it may not pass off too quickly, but continue its proper stimulus for a certain time. But this food is by no means calculated for the weaker powers of the luxurious and indolent, who require, on the contrary, an aliment easier assimilated, to digest which, the action of the stomach is little exerted.

All rules of diet, however, must be directed by the particular circumstances and situations of the individuals for whom they are intended. No general directions can apply so well as those drawn by every man from his own expe-

rience. But still some leading axioms on this subject ought to be kept in view, the principal of which are here laid down :—

1. The first to be attended to is, that the *nourishment taken in should be sufficient to supply the waste of the system.* If left to nature, this would properly be determined by the state of the appetite. The appetite is that sensation or call which nature employs to intimate the wants of the body, and should be indulged until it is satisfied, whenever the body is in a healthy state. The only objection to this rule appears where the stomach has been habitually over-distended : then the appetite will continue even to excess, and must not be indulged to the extent of its desire ; for, the consequence of indulging this excess, would be, in the end, the production of corpulence, fulness of blood, and all the dangers of over-repletion, while its immediate effects on the stomach and bowels

will be equally disagreeable, in inducing headach, fever, diarrhœa, and other disorders.

2. The second rule of diet is, *that the stomach should be slowly and gradually filled,* as sudden distension of the stomach is both injurious to the organ, by expanding its fibres too rapidly, and also by preventing the proper quantity of nourishment being taken in. It is also injurious in another point of view, by the imperfect mastication of the aliment, by which is prevented a sufficient preparation of the food, previous to its reception into the stomach. By this means the powers of the latter will be more increased in assimilating it.

3. The third rule is, *that the aliment be prepared in a simple state,* for in this state it is found to be most nourishing. All the multiplied combinations of viands which the art of cookery has introduced and refined on, in pro-

portion as they please the palate, are, perhaps, to be considered as destructive to health. The real nourishing part of the food is only what is convertible into *jelly* or *mucilage*, *oil* and *sugar*. All the other parts are unnecessary appendages, which, by their bulk, merely fill the stomach; though this distension of the organ acts, perhaps, in an indirect manner in conducing to promote digestion, by keeping a certain stimulus upon the organ, from this expansion of its fibres.

4. The fourth rule is, *to confine the aliment to one kind*, or rather to eat chiefly of one dish. By this practice the stomach is not solicited to eat too much, which is apt to be the case where variety prevails; and, from one wholesome dish, nourishment is better prepared and concocted than from an heterogeneous profusion. Every meal also should be begun with solid aliment, and liquid nourishment

should be interposed towards the conclusion. This is the reverse of what is usually practised: but it is evident that a sudden distension of the stomach with soups, broth, and liquid viands, prevents its taking in, without over-distension, a sufficient proportion of nourishment, or of aliment, acting by and keeping up a permanent stimulus.

5. A fifth, and very important rule in modern life is, *not to make the distance between meals too great.* Thus, the body will be regularly supplied with nourishment, and no unusual craving or debility ensue. The regulation of this distance should be determined by the process of digestion. This process we find generally completed in three or four hours; and, observing this rule, every meal should succeed another at this distance of time. Long fasting is attended with effects equally pernicious as over-repletion. It produces a ten-

dency to putrescency, and the general mass of fluids becomes tainted. In consequence of it also, the appetite begins to fail, a loathing of food ensues, and a slow creeping fever pervades the system, and enfeebles every action of life. The distance between meals as observed by modern fashion, tends somewhat to induce the same evil, though not in that degree. Protracting dinner, the principal meal, to a late and unusual hour, so far destroys the tone of the stomach, as to prove the origin of most of those dispeptic complaints which affect men of business, and the higher ranks of life. This meal, from its late season, is more indulged in, than it otherwise would be. The stomach, in consequence, becomes over-distended, and, no time being allowed by the approach of evening, for the exercise necessary to assist digestion, this process is not completed till the hour of sleep. Hence, crudities are generated, *night-mare* and other affections

from over-repletion interrupt rest, and morning uneasiness succeeds this too late and solid repast.

6. The sixth rule is, *not to allow exercise immediately to succeed a meal.* Digestion quickly follows the reception of the food. Nothing, therefore, should interfere with the action of the organ wholly engaged in this process. This rule is particularly applicable to the delicate and nervous; and the brute race pay particular attention to it, by lying down and enjoying a state of rest the moment their stomachs are filled. With man the pursuits of life and the engagements of society do not, in general, permit it to be carried so far; but, a sufficient time of rest should be allowed after every meal, that the operation of digestion may fairly and regularly proceed. Sleeping after dinner, the principal meal, is the practice of some countries; and this practice is only to be

condemned where it is carried too far. After middle age, it will always be found useful; and, it is highly necessary in warm climates, where the body is feeble and enervated by the relaxing influence of the burning atmosphere, and where the diet, being also more of a vegetable kind, requires to be more completely assimilated, in order to its conveying a full proportion of nourishment.

With these leading facts, or general rules, held in view in regard to the use of aliment, we are prepared to enter upon the particular kinds of it commonly introduced at table; and, first, of animal food.

Animal Food.

Animal food we are to consider both as the most nourishing and stimulating of all aliment. Hence, when prematurely and excessively used, as is too frequently done with chil-

dren, it tends to bring on too early a maturity, to exhaust the system by an excess of strength, and, of course, to induce in the same proportion a rapid decay. But, though this is the general tendency of all animal food, it differs from itself in its several species or kinds more than most other sorts of aliment, in consequence of the difference in the nature of the animals from which it is taken, in their mode of life, their external situation, and a variety of other circumstances.

Fresh meat is to be considered as the most wholesome; and whenever it is dried or prepared by salting, it loses its nourishing quality in a certain degree, and becomes more unfit to supply the waste and preserve the health of the system.

The meat of tame and domesticated animals, is also preferable to those that are wild and live in a state of nature. They are more

juicy and tender in their fibres, while the others are more rigid and dry, and consequently are more indigestible.

The form of preparing the meat, has also a necessary relation both to its digestibility and degree of nourishment.

In the raw state, although some animal substances are eaten, yet, it is not the form in which they are now the most agreeable. They are, therefore, prepared by the application of heat and moisture in various ways, or what is known by the name of *Cookery*.

One of the first of these ways is by *boiling*. By this process the meat is deprived greatly of its nourishing quali y, or of its *jelly*, which is introduced into the fluid or soup. Wherever it is wished to introduce a quantity of nourishing matter quickly into the system, this con-

version of it into soup is preferable to any other mode of cookery; but, in ordinary health, taken in this form, if solely trusted to, it gives the stomach too little to do, and the meat itself is left in that indigestible state, as to be rendered unfit for repairing the waste of the body, or conveying the proper stimulus which animal food is intended to produce.

Roasting is the form in which animal food is most relished, and by this form it is both rendered highly palatable, and its nourishing qualities are at the same time abundantly preserved. The outer parts, however, exposed to the fire, acquire an empyreumatic taste, and, from being also more dried, are less digestible, and sit heavier on the stomach, than the internal particles of it, when this form of cookery is used.

Baking, the next mode, possesses most of the advantages of roasting, with the addition

that, by preventing evaporation from the surface, in consequence of the crust that covers it, its nourishing parts are better preserved than in any other form. But, as it is apt to sit heavy on some stomachs, from the greater retention of its oils, it requires the additional stimulus of spices and aromatics to render it lighter, or increase the powers of the stomach to digest it.

Frying is a mode in which a somewhat similar operation to baking takes place. Part of the substance of the meat is at first melted down; but a crust is soon formed by the fire over the rest, which preserves it and renders it soft and mellow. The abundance of fat or oily matter used in this operation is the only objection to it, by rendering it as food somewhat indigestible; and the same attention to increase the powers of the stomach by seasoning, is necessary here as where baking is employed.

With respect to the parts of animal food, we are at all times to consider fat meat as more nourishing than lean. The fat of animals also regularly fed, is preferable to those that are fattened for the purpose of slaughter, as its sudden accumulation, and the sluggish inactive life to which the animal is subjected, renders this species of food most unwholesome. The flesh of young animals reared in a state of nature, or nearly so, is of all others the most proper food; and any excess of fat or oily matter taken into the stomach, may be rendered light and digestible, by a proper quantity of salt, acting as a solvent of it, and at the same time by increasing the action of the organ, with the aid of condiments of the simplest kind.

If the flesh of animals is used when young, and in its natural succulent state, there will be little occasion for improving its flavour by the

common operation of castration; for the more the animal is preserved in health, the more perfect will be the nourishment which its flesh affords; and as this nourishment depends alone on the quantity of mucilage and jelly its parts contain, we have always a proper rule to determine us, where nourishment alone is wanted, in the choice we should make.

The use of animal food must also be regulated by external situation. From its strong stimulant powers, it agrees best with a situation in which the action of the system is rather depressed. Thus a cold atmosphere is more suited to that kind of diet than any other; and the influence of summer both requires its quantity to be abridged, in order to preserve the body in health, and also, in order to avoid its tendency to induce a putrid state, which is best counteracted by a suitable interposition of vegetable matter. Excess of animal food na-

turally renders men fat and plethoric: and as disease is the unavoidable consequence of this state of repletion, such moderation should be observed in its use as not to exceed what is strictly conducive to health, the deficiency of quantity being made up by a suitable interposition of vegetables. The appetite, though certainly intended to be so, we are not to consider the proper criterion of the quantity required to supply the waste of the system; for this guide we find too often apt to be violated, and a craving will continue to remain after the fullest meal.

Quadrupeds.

Of the different kinds of animal food, quadrupeds certainly afford the strongest and most copious nourishment. Game, though not the most nutritive, is the most stimulant and heating species. Tame animals, full grown, are next in rank, and young domestic animals

are least so. Carnivorous animals are also more stimulating than the graminivorous, and, therefore, are more liable to produce a putrescent state of habit when used.

Fish, in point of its stimulating quality, are greatly inferior to quadrupeds, and, though they contain a good deal of nourishment, yet it is less congenial to our nature. The use of some kinds of it is even attended with danger, and produces morbid effects not unfrequently terminating fatally.

Poultry is the mildest and most wholesome of animal food, from its situation and mode of life. It is less apt to be injured by the refinements of luxury, and may accordingly be more largely employed, without producing any noxious consequences to the system.

Meat of particular Animals.

With these introductory remarks, the addition of a few practical observations on each division of the most common species of animal food will next be proper to direct us farther in its use.

The bovine kind, or bullock species, in this country is in most general request; and it is presented in two forms, differing in age, of *Veal* and *Beef*. Veal is best at the age of six weeks. It is the proper food for invalids, and, particularly in consequence of its abundance of gluten for those disposed to a spitting of blood, or in pectoral cases. As it is also that species of animal food, where juices are least exalted by age, it is most adapted to such habits as discover a scorbutic tendency. The best mode of using it is by roasting, and the parts of it fitted for this operation are the kidney piece and the breast. To weak indolent stomachs, its diges-

tion requires to be assisted by the addition of vegetable acid.

Beef contains a strong wholesome nutriment, and is most suited to those who possess a vigorous stomach, and use much exercise. Roasting is the most nourishing form of eating it, the same as with veal. It is always in season, and is therefore more relished than any other species of animal food. Its wholesomeness, however, is much determined by its mode of feeding, and its digestibility by its age. When old and stall-fed, it is by no means fit for use.

The ovine species, or sheep kind, presents us, like the former, with an aliment under two forms, of *Lamb* and *Mutton*, differing only from each other, like the former, in point of age.

Lamb is a light wholesome food, and highly

nutritious; and a fit aliment, from its easy digestion, for the sickly and weak. It is best when six months old, and is preferable to that used at an earlier period. Like all young food, it should be eaten with a portion of vegetable acid, to correct its insipidity. Reared at home, under the name of *House Lamb*, its relish is more insipid, and as food it is also unwholesome.

Mutton, or the animal at its mature age, is a far preferable nourishment. It should not be younger than three years when used. The wether is reckoned the best kind; and when fed on a dry pasture and near the sea-shore, it is in its highest perfection. Roasting is its best form; and before dressing it, it should be exposed for some days to the open air, which mellows it and renders it more digestible. The fat of mutton is less easily assimilated in the stomach than the fat of most other animals,

from its tendency to coagulate. The lean of this animal is, therefore, the preferable part for food: its fat, however, is usefully employed in injections, in case of acrimony in the bowels.

Pork forms a strong nutritious food; but, from its great quantity of oil, it requires much exercise and a good digestion, to use it largely as aliment. In all cases where there prevails either a strong tendency to inflammation, or where there exists a fault in the fluids, pork is an improper and pernicious species of nutriment. A less quantity of it is necessary than of most others; and its digestion should be assisted by the use of acids, or it should be employed in a form in which salt is largely conjoined with it, to assist the solution of its oily parts. Hence, salted pork is most digestible, if not too much smoked or dried. The qualities of pork may be said also to differ much from its mode of feeding: and by more attention to

rearing it for its quality, than in order to procure a great accumulation of fat, which is the object aimed at, it might be rendered a species of nourishment equally wholesome with any other. In the wild state, the flesh of this animal is a preferable food, both in point of relish and digestibility.

Goats are an animal little used for food but when young. The flesh of the kid, though much inferior to lamb, is still succulent and tender, and in the warmer climates, where lamb cannot be procured, it forms a desirable nourishment.

Game, as venison and hares, can only be eat, to relish their flesh properly, when long kept, and passing towards a state of putrefaction. They can never afford a wholesome food; but, eaten in this manner, their flesh makes a mellow nutriment, easily assimilated with the fluids. It is best prepared by roasting or stewing. A

vegetable acid, either in the form of vinegar or lemon, makes a proper addition to this food.

This is the sum of the observations necessary on the first division of animals used for food, or the quadrupeds of this country. The second division, or poultry, offers a much lighter and more wholesome elementary substance; but, in the same proportion is its nourishing quality inferior. This, however, is also regulated a good deal, as in the former, by the selection and mode of feeding; for fowls that use much exercise, are less esteemed than those that observe a different course, from being dryer. Fowls feeding on grain and vegetables, are superior to those that live on insects or fish. Particular times of the season also have an influence on this tribe as food, and those in the domestic state have a superior flavour and taste to the wild. In enumerating the different kinds, we observe, that the gallinacious tribes afford the lightest

and most wholesome nourishment. The cock and hen are in most general request. The former, if old, is only fit for soup; but, at the same time, the capon is one of the most delicate viands we possess, and, from its tender juicy fibre, is easily assimilated into chyle. The young hen is equally wholesome, and may be considered in its mildness as nearly equal to vegetable aliment. It is the food generally recommended for the invalid, and it is best prepared by roasting.

Geese and ducks are a strong, and afford rather an unwholesome nutriment. They have been supposed as giving a tendency to cutaneous diseases. Their fat is certainly highly indigestible.

Turkey is not so light an aliment as the hen or capon, and some parts of it are difficult of digestion. As it is usual also to accompany it

with stuffing, this effect is even increased by the form of eating it.

The Guinea fowl much resembles the turkey, and the same observations are applicable to it.

The pheasant, in the same manner, is like the hen, but superior in flavour and delicacy.

Of the smaller fowls, pigeons are much used: but they are of a heating stimulating nature, and should, therefore, when health is concerned, be only occasionally indulged in.

Some small birds also are occasionally eaten, as larks and starlings: but they are all unsavoury, and scarcely digestible. They are best prepared by baking.

From poultry, then, we proceed to fish, which is less congenial to the animal nature than the

two former divisions. It affords but an incomplete nutriment, and it is not so digestible as the animal food already considered. It possesses also (its peculiar characteristic) a strong tendency to putrefaction. Hence, there are many objections to its use, from the natural habit or state of health of individuals at the time. These faults of fish, however, are somewhat corrected by the manner in which it is commonly eat: sauces and pickles of an acid nature are generally employed with it when eaten in a fresh state; and when dried, salt and spices have a similar effect by promoting the action of the stomach for its easier digestion.

Salt and dried fish, though difficult to digest, are useful in some cases, where an acid acrimony in the stomach or first passage prevails. Salt fish prepared by a natural exposure to the open air, and washed with salt water, are less injurious than those cured by oil. That

this food, like the others, has its quality influenced in some degree by its situation and mode of life. Thus, river fish are more wholesome than those that occupy stagnant waters; but, the salt-water fish are, on the whole, the best.

Having made these general remarks on this kind of aliment, it is needless to particularise them; but, before leaving the subject, shell-fish and the amphibious tribe come also into review.

Shell-fish have been considered as highly nutritive: from their indigestible nature, they certainly continue long on the stomach, which may have given rise to this opinion, without any proper foundation for it.

Lobsters possess a peculiar acrimony, and, unless eaten very fresh, are a dangerous food,

even though corrected by the acid and spices used along with them.

The same observations may be applied to the crab. Eruptions of the skin are said very often to attend the use of this aliment.

Oysters are the safest food of this kind. They are best eaten raw, and contain much nutritive jelly. They prove laxative in this state, and have been much recommended in consumptive cases. Snails, though seldom eaten, are used as a remedy, with the same view.

Muscles are a food that often proves of a deleterious nature; and much caution should, therefore, be observed in using them. The vegetable acid is accordingly a proper addition here.

The chief of the amphibious tribe, the last

division, is the turtle or tortoise, a species of lizard, reckoned of the first luxuries of the table. Its flesh is wholesome and delicate; and it resembles, in its salubrity, veal or young poultry. When used in the natural state, it cannot fail to prove highly nutritious: but when changed by the refinements of cookery, and united with such a number of heterogeneous articles as are used in its dressed state, its nourishing qualities must be in part destroyed, and the only effect of its improvement will be, to excite fever and overload the stomach.

Besides the turtle, some parts of frogs are also eaten, particularly the legs, and are much relished when prepared as a fricassee.

Of Vegetable Diet.

Having thus discussed, as far as may be necessary for the preservation of health, the different particulars of animal food, and their

properties, we proceed to the second head of aliment, formerly specified, or the consideration of a Vegetable Diet. In this species of diet a great variety occurs: but the first and leading division of it is that which arises from grain or farinaceous seeds. The farinaceous grains contain much nourishment, and, as a proof of it, they yield a copious mucilage: but they are, at the same time, somewhat difficult to digest. From these grains is prepared what we name bread, which has been considered so essential to our support as to be termed the *Staff of Life*. This proportion is divided into two kinds, leavened and unleavened bread. Leavened bread is that prepared by a slow fermentation, in consequence of which all the tough parts of the flour are ultimately mixed with the dryer parts, and, by the after operation of baking, the fixed air comes to be expelled. This preparation of bread is, therefore, the most wholesome, and, the longer it is kept, it proves the more so. New bread

contains much indigestible paste; and, its fixed air not being entirely expelled, it becomes extracted in the stomach, and produces flatulence, cramp, and indigestion. This effect is easily prevented, either by keeping the bread till stale or toasting it. Stale bread is, therefore, at all times the most wholesome, as, by this delay of using it, the process of mixture and fermentation is entirely completed, and particular attention should be paid to using it in this state, by all who are liable to complaints of the stomach, which are readily incurred by this cause. Unleavened bread is that prepared by the simple mixture of flour and water, without subjecting it to any fermentation. Such bread is always indigestible, from its viscid nature, and from the quantity of mucilage with which it abounds.

In making good wholesome bread, many circumstances are necessary to be attended to.

1. The first is, to select the best species of grain for the purpose; and wheat has been generally preferred in this country without any mixture.

2. The age of the grain, or rather flour, when used; for, the older it is, the less tenacious.

3. The third is, the fineness of the flour, and its entire separation from the coarser parts.

4. The fourth lies in the proper fermentation and baking.

5. The fifth is the quality of the water or fluid employed for mixing it.

If these circumstances are attended to, the bread then formed will be light and porous; for the sponginess of it is to be considered as a

test of its proper fermentation and the entire extrication of its fixed air. Such bread also will thoroughly dissolve in water, without showing any marks of viscidity.

The more that bread is formed different from these rules, the more indigestible it will be found, and will, with invalids, be apt to lay a foundation of stomach complaints and those other ailments which are the consequence of imperfect digestion. This particularly applies to all unfermented preparations of flour, whether in the form of bread, pudding, or pastry: the two latter of these forms are even rendered worse in this respect by the different articles with which they are mixed.

The quantity of bread that ought to be eaten, must be regulated by circumstances. Where animal food is much used, less of it is necessary than of vegetables of a watery or

acescent nature. But, where the proportion of vegetable diet is intended to exceed, bread, as being the most nutritive article of this class, should be much preferred.

The same situations also of individuals that exclude much use of animal food, recommend, in a reverse proportion, the increase of this article; and, a certain quantity of it is necessary, we may say, with every species of diet, to prevent that satiety and disgust which we feel from the long continuance of every other article buti tself. If one-third of animal food to two-thirds of vegetables, be a proper proportion of diet, as formerly stated, then these two-thirds should consist more of bread than of any other vegetable preparation.

Of the different grains for the preparation of bread, wheat is the principal. It is originally, we are told, the production of Sicily; but, in

consequence of the improvements of cultivation and agriculture, it is rendered the most nutritive grain we possess, and very different from what it was found in its original state.

Rice may be considered as the grain most used next to wheat, although it affords a nourishment less permanent. While wheat is the favourite production of the Western hemisphere, rice is, in the same manner, of the East. It forms almost the sole diet of the Gentoos, who correct its imperfect stimulus in the stomach by the addition of aromatics, spices, and other seasoning, to the highest excess.

Rye and oats are the grain next in repute for the same purpose. Rye bread is reckoned easily digested, and very wholesome, having little tenacity. It is an article much used on the Continent. Oats are an article of stronger

nourishment than rye; and, like the rice of the Gentoo, form the principal diet of the poorer classes of the northern parts of the British Islands. This mucilage is much used by the invalid and infirm, both as a nourishing substance, and as possessed, at the same time, of a gentle aperient quality.

Barley may be mentioned after these grains, as forming less an article for bread, than being the basis from which the malt liquors of this country, after it has undergone a fermentation, termed *malting*, are procured. Its consideration belongs to this head, though it is occasionally used, in its natural or decorticated state, in broths and soups, to give them consistence and a mucilaginous quality.

Millet is a grain inferior to any that has been enumerated, and its mucilage is too crude for any but the most active stomachs.

The manna-grass may be here noticed as a favourite seed of the Germans and Poles. It has a sweet agreeable taste, and, boiled in milk, is said to prove remarkably nutritive. It is used more for invalids than as a common article of diet.

The second order of vegetables, termed *pulse*, differs from the class now examined, chiefly in its proportion of strong gluten, and the quantity of fixed air its particles contain. Its bread, therefore, though perhaps even more nourishing, is difficult of digestion, and forms properly a diet for only active and laborious stomachs: it produces a costiveness, and these effects are increased in proportion to the age of the articles. The chief individuals of this class in this country, are beans and peas; and in their use much caution is necessary to counteract those effects they produce on the stomach and bowels.

When young and in their recent state, green

peas and French beans are favourite dishes. They are still to be considered as flatulent, but, at the same time, digest with sufficient ease.

The third order of vegetables for diet are the various species of greens. These are chiefly used to counteract the effects of animal food, as they are of a watery and somewhat ascescent nature, and, at the same time, contain little nourishment. They are, in summer, a proper addition to other food, and, being of a laxative nature, they are useful in this season to relieve the bowels where costiveness takes place, as is usual from the increased discharge by the skin. If eaten in a raw state, their solution in the stomach is assisted by vinegar and spices, and other condiments. When boiled, it should be chiefly by vapour, or in as dry a state as possible; which will abundantly soften their texture; and the addition of spices will render

them less flatulent. Baking them, destroys their principal qualities as vegetables.

Asparagus contains some nutriment, and possesses also diuretic qualities.

Artichokes are much the same, but less diuretic.

Spinage is a delicate green, which becomes very soft when boiled, but is apt to produce acidity or heartburn.

Sorrel, from its acid, is an excellent anti-scorbutic; but is best in its raw state.

All the cabbages are hard and indigestible. They require a great deal of boiling, and cannot be too much softened in their texture to render them fit for the stomach. Sour krout, or cabbage in the raw state, sliced, salted, and

allowed to undergo the acetous fermentation, is a favourite antiseptic preparation with the Germans, and is much used at sea.

Lettuce possesses something of an anodyne quality, and is a wholesome article of sallad, to which several additions are generally made.

The next class of vegetable productions, is the roots, which, next to grain, is the most useful variety of vegetable substances. They are of two kinds, the mild and the acrid. The first are the most nourishing, the latter are chiefly eaten as condiment, or for medicinal purposes. Of the first or mild kind, the principal article is the potato, a substance, the growth of which is extended in this country to an incalculable degree, within these few years, and is the best substitute we possess for bread. It is properly a light alimentary substance, neither viscid nor flatulent, and having no tendency

also to produce acidity. The principal food of many countries consists almost entirely of this article, with the addition of milk; and they form together, a nourishment fit to support the most laborious and active in a state of health, without the necessity for any other kind of aliment. Such is the mode of living among the lower orders in Ireland, a country usually distinguished for the health, vigour, and natural acquirements of its inhabitants. As this vegetable is of a dry nature, a proper quantity of fluid or drink should be used along with it. Its flour has been recommended for pastry, and dishes prepared from its meal, in preference to that from the grain, as being of a less viscid tenacious nature. In the choice of potatoes, those of the farinaceous kind are the most wholesome, those that are gelatinous are not so readily digestible. Various inventions have been attempted to convert this vegetable easily into flour.

Beet-root is a sweet culinary vegetable, not deficient in nourishing qualities, but somewhat flatulent. It has been, therefore, proposed, when used in diet, to join it with some of the more acrid roots, to prevent the bad effect of it.

Carrots. The same fault applies to this root as the former, and it requires on that account much addition of condiment to render it a wholesome vegetable for the stomach. It is said to be diuretic, and also destructive to worms.

Parsnips possess the same sweetness as carrots, with the aromatic principle joined, and are, at the same time, less flatulent in their effects. Part of their sweetness is lost by boiling.

Turnips are flatulent and somewhat indigestible, unless when boiled. The best kind are the Swedish.

From the enumeration of this first order of mild roots, we proceed to the second, or *acrid.*

The first and least offensive is, the parsley and smallage, which are both somewhat stimulant and aromatic. They are both supposed correctors of the blood, and in their medical properties are mildly aperient and diuretic.

Celery is the most fragrant of the acrid roots, and, though somewhat indigestible when raw, is the reverse when prepared by boiling or soaking it in vinegar. Two species of it are in use, and in both the root is the most active part, though the shoots are preferred when eaten as a sallad. From this part a kind of coffee is prepared ; but the aromatic principle of the vegetable must be greatly injured by the mode of preparing it.

Skirret is a root of a sweetish and spicey

flavour, slightly stimulating, and in its effects diuretic. It is eaten raw, or forms an ingredient in soups.

Salsify somewhat resembles asparagus, and forms a good substitute for it. It is not so generally cultivated in this country as in others.

Garlic and its different species, as onions, shallot, and chives, are warm stimulating roots; useful in assisting digestion, expelling flatulence, and freeing the bowels of any viscid accumulations. They agree but with the cold phlegmatic constitutions; and in such, from their volatile penetrating nature, they display the happiest effects, where viscidities oppress the lungs and head.

Radishes are all of the same nature, though they are not so powerful. They agree best with an active vigorous stomach, for they are trou-

blesome by generating flatulence, in consequence of the extrication of air that arises from their use. The smaller the radishes, the easier they are digested.

All this class, as well as the former, give a very offensive smell to the breath.

The last order of vegetable substances used in diet, consists of *Fruits.* These are, for the most part, the production of summer, and they are composed of those principles which are adapted to allay that excess of heat, and increase of circulation, which the body feels at that period.

The bad qualities of fruit used in diet arise from its excess of acid, or its tendency to fermentation. The more unripe the fruit, the more it will possess of its acid principle; for this is converted, as it proceeds to maturity, into a saccharine matter, or sugar;

and, it is in this ripe state, when it abounds in the saccharine matter, that fruit is most safely used. The tendency to fermentation, again, will be much connected with its quantity of juice: the more juicy, therefore, any fruit is, the more fermentable it will be upon the stomach, and the more apt to generate flatulence and the other symptoms connected with it. The dryer, then, any particular fruit, the safer it is for the stomach. These bad qualities of fruit are corrected in several ways.

1. By the mode of preparing it for use. Thus, boiled it is less flatulent than in its natural state.

2. By the addition of spices or sugar to it, which will check its flatulent tendency, and correct its acidity; and,

3. By its junction with alcohol or ardent

spirits, as a little rum or brandy, which will destroy the disposition to ferment. By either of these methods it may be safely employed in moderate quantity, as an addition to other diet at that period of the season when aliment of a cooling nature is required.

Sago, though not strictly a fruit, belongs to this division. It is used in India as bread, in the form of cakes; but here is only employed for the invalid, as a mild nourishing substance, in cases of consumption, or acrimony of the stomach or bowels.

Cherries, from their strong acid, are peculiarly antiseptic. While they are useful, therefore, in all diseases where a tendency to putrescency appears, or where this state has actually commenced, they are equally injurious in health, and produce in the stomach all the bad consequences which have been ascribed to this

species of aliment. The sweeter kinds are less hurtful than the others, for the reasons we have already assigned; but, it may be observed, that cherries, like all other stoned fruits, possess something peculiar in their nature, which renders them not so salutary to the stomach as other fruits, even independent of the general principles they possess in common with other fruits. In the use of stoned fruits, much attention should be paid to avoid the swallowing of the stones, as from this cause the most fatal effects have at times arisen.

Plumbs are liable to the same objections with the former, but not in so great a degree. They should be used, however, only when full ripe, and, therefore, those kinds which ripen best in this climate should be preferred. The largest kinds seldom attain here their full maturity.

Tamarinds yield, from their pulp, a highly

grateful acid. In the warm climates it quenches thirst and allays heat, but is here only used medicinally.

Peaches are a salutary kind of fruit, of an attenuating nature, and therefore useful in obstructions and bilious disorders. They are best in their fresh state, and their kernel, as being a grateful bitter, should be eaten along with them. This fruit is of various kinds; but the thin downy skinned species is the best.

Apricots is a fruit not so healthy as peaches, from its tendency to the acid fermentation; but in their ripe state, they are a cooling antiseptic.

Pears are generally somewhat hard and indigestible. They tend also to produce flatulence; even the sweetest and most saponaceous kinds are inferior to the next fruit, or—

Apples; which are an aromatic fruit, laxative

in their medical effects, and in general cooling and antiseptic. They attenuate also viscid phlegm, and are recommended in pectoral affections. The various species differ in their degree of aromatic principle, in their degree of acidity, and also in their proportion of juice. According to their possession of more or less of each of these principles, their medical effects are to be judged of. Their kernels and those of the former fruits are to be considered as correctives of the fruit itself, and rendering it more salutary to the stomach.

Quinces are a combination of acid and mucilage, and, therefore, useful antiseptics, especially in dysentery. Their pulp is, however, somewhat indigestible.

The lemon, orange, and fruit of a similar kind, possess a grateful juice, more or less acid, with an aromatic bitter rind, and a

powerful essential oil, strongly astringent and heating. It is the juice only that is used in diet; the other parts are occasionally used in medicine. The acid of these fruits, termed the *citric acid,* forms the proper specific for the scurvy, and is also the best corrector of vegetable narcotic poisons.

Raisins are a fruit of a nourishing quality, but flatulent. Their juice is an agreeable acid, not unlike that of the lemon.

Currants resemble them, and both fruits are safely used along with other aliment. They are both of an emollient and laxative nature.

Gooseberries are a cooling refreshing fruit, much more wholesome and safer to be used than any of the former.

Figs are a fruit highly nutritive, but at the

same time flatulent; a fault which is equally to be ascribed to mulberries and raspberries. They are good as allaying thirst, and their juice is much of a cordial and vinous nature.

Grapes and strawberries are both very wholesome. They tend to promote all the evacuations, and are laxative without inducing any apparently weakening effects. The quality of the former is much varied by soil and climate. The sweetest kind are the safest to be used. The latter are supposed to possess qualities against the stone, and are much recommended with this view. The wild strawberry has the most agreeable flavour, and is, perhaps, the best of the whole species.

These form the principal dietetic fruits that have been enumerated. What remains may be properly termed *farinaceous fruits,* possessing a mixture of properties.

The first of these is the cucumber, which is a cooling antacrid production, gently opening, though liable to ferment. This effect may be corrected by the addition of spices. In the form of a pickle it is an useful antiseptic.

Melons much resemble cucumbers, but they are not so wholesome. They require the addition of alcohol or wine, with sugar, to prevent their fermentation on the stomach. Gourds are an inferior kind of melon, of a larger size. They are used boiled, and require much condiment or salt and pepper to render them wholesome food.

Olives are best in their pickled state, as they then lose much of their bitterness and acrimony. From their oily nature, they are improper for delicate stomachs.

All the nut kind, as almonds, walnuts

hazel-nuts, filberts, &c. though they are of a nourishing nature, yet are both indigestible from their hardness, and also contain a considerable quantity of oil. This oil, by becoming rancid on the stomach, is very apt to produce heartburn. In eating these fruits, they should be fresh, and their acrid skin carefully removed. They should undergo also a thorough mastication, and be eaten with the addition of salt. Their use in quantities is also pernicious, and is said to occasion difficult breathing, and complaints in the stomach and bowels.

Next to the fruits, and the last species of aliment, is the fungous productions, termed *mushrooms*. They form the connecting medium or chain between animal and vegetable food. They are all of a tough leathery consistence. Hence they are highly indigestible, and require the assistance of much condiment to

render the most tender of them fit aliment. Many of them also are possessed of a narcotic and poisonous nature, which renders the whole tribe unsafe to eat, from the danger of not making the proper distinction between the different kinds. The best antidotes are the vegetable acids; and therefore in their pickled state they are best used.

2. *Of Drink.*

Aliment we have hitherto considered chiefly in a solid state, or in the form of food: we are next to examine it as a liquid, under the name of *Drink*. Drink is, perhaps, more necessary than food to the support of life, and without it even the digestion of food cannot take place. The want of it, or too sparing a use of it, produces the worst effects, both on the stomach and bowels, and also extends its powerful influence on the blood, which acquires, from this cause, an acrimony highly pernicious;

nor are the secretions less injured, which also assume the same vitiated state, and lay the foundations of obstructions of a fatal nature.

The rules, however, for drinking, require the same caution and regulation as for eating; and the principal of them may be reduced to the following heads:—

The first rule is, the quantity to be used, and this is to be determined by five circumstances, viz. the degree of thirst, the time of the season, the quantity and nature of the victuals, the hour of the day, and the state of the constitution.

The first is regulated by our desire; and as the cessation of hunger is properly the test of the quantity of food, so the allaying of thirst should certainly be the criterion for the quantity of drink. In all cases the proportion of drink should be greater than that of food,

and double the quantity has been stated as a good general rule to be guided by.

The second, or the time of the season, will also regulate the quantity to be taken. Thus, in summer, when the discharge of the skin is increased to excess, double the quantity is necessary to what is required in winter, when this discharge proceeds in the usual and regular state.

The third circumstance, or the quantity and nature of the victuals, is equally to be attended to here. Thus, a large proportion of victuals will require a greater dilution than a small portion; and the dryer the nature of the food, the more beverage will be necessary.

The fourth circumstance, or the hour of the day, will also regulate our quantity. Thus, we are in general less inclined to drink in the

earlier than in the later hours of the day, from the fluids in the early part not being dissipated by exercise, or other causes increasing the action of the system.

The last circumstance, or state of the constitution, has also an equal influence; for the phlegmatic and melancholic constitutions have less inclination to drink than either the sanguine or choleric.

As the object of all drink is the dilution of all food, it should neither be begun before a meal, nor continued much in the course of it. It should properly succeed it, regulated by the rules we have already laid down.

Excess of drink is, perhaps, not equally hurtful as the want of it; but, still it is attended with pernicious effects, in relaxing the stomach too much, and in inducing an impoverished

state of the fluids, which lays the foundation of the most obstinate chronic maladies.

Having thus determined the quantity to be used, the next regulation respects its quality, including a consideration of the various simple and compound liquors employed at table.

Water.

The first beverage, the basis of all other liquids, and the means by which the aqueous parts of the system supply their waste, is water. This fluid is very different, from the qualities it receives from its various impregnations; for it never can be considered as an entirely simple body. All water, however, may be esteemed fit for the use of man, which does not contain above ten grains of mineral or earthy matter in the pound, and comes under the denomination of *soft water*. All water that exceeds this proportion is to be considered as hard water, and to be rejected from domestic use.

Water, however, though soft, is often contaminated by various impurities; and when no other is to be had, from the particular situation or circumstances of individuals, it becomes then necessary to be acquainted with the different methods of rendering it, even in this tainted state, fit for use.

The first method of purifying water is, by boiling and filtering, or, what is more effectual, by submitting it to distillation. But this method gives to the fluid a mawkishness and insipidity disagreeable to the taste. To keep it from corruption or impurities of this kind, acids or charcoal is the most certain method. Thus, half an ounce of powdered alum will purify twelve gallons of water. A small quantity of alkali and vitriolic acid will even preserve a cask of it from this state. Lime, in a very trifling proportion, will do the same. Vinegar forms a good antiseptic, where bad water is

used. Charcoal is a powerful corrector of putrescency, and the staves of water-casks have been therefore recommended prepared in this way.

The moderate use of water of a proper temperature is the best beverage that can be employed. It strengthens the stomach, assists digestion, and gives a proper impulse to the circulation of the small vessels. In the list of longevity, water-drinkers stand high; but, in its use, the circumstances of the individual must regulate both its quantity, and also the temperature in which it ought to be employed.

Division of Liquor.

Water, then, forms the basis of all other liquors; and the latter may be divided into two heads, as they are the production of the process of fermentation and distillation.

Wine.

The first of the fermented liquors that claims our attention is wine, a liquor which has received the highest encomiums, and which, properly used, is the solace of the invalid and aged; but, when the reverse is the case, it proves the ruin of the constitution and the source of disease. Wines are divided into two kinds, the foreign and the home-made. The former is preferable, as being more perfect in its fermentation, and more wholesome in its materials. All wine contains three principles; a proportion of alcohol, of acid, and of sugar, with a particular aromatic principle or flavour, with which the distinction of wines is connected. On the predominance of one of these principles does the strength or weakness of the wine depend.

For the weak and infirm, those wines in which the proportion of the sugar or saccha-

rine principle exceeds, are the most proper, as the sweet wines of Russia, Italy, Greece, Malaga, &c.; but they ought to be properly fermented, and have no posthumous addition of sweets, as sugar or honey, to adulterate them after the process.

For the variety of complaints in which fever or increased circulation is predominant, those wines which are distinguished by an excess of the acid principle are most useful, particularly those of France and many parts of the Continent. The degree of strength in which those wines should be used, must be determined by the nature of the complaint and the state of fever present in the system.

For the real state of health, wines in which the principles exist in a just proportion are the most proper. Those that contain their suitable quantity of alcohol or spirit are considered as

agreeing best with the British constitution. They will at least agree best with the stomach, as preserving its tone, and, if not carried to excess, will, on the whole, be the most salutary beverage.

Besides the foreign, the fruit wines of this country are numerous, and many of them in particular request. Many objections, however, may be urged against them, as their fermentation is never complete, and the fruits themselves want the rich flavour and zest that belongs only to the grape.

The apple wines, under the names of cyder and perry, have been particularly inveighed against from their mode of preparation; for, by being passed through leaden tubes, part of the corroded metal is dissolved by them, and gives occasion, where largely used, to obstinate affections of the bowels, under the name of the *Devonshire Cholic*, which sometimes ends in

palsy. Oil and sulphur are the proper remedies for this complaint.

The general effects of wine are those of a stimulant liquor on the system. It increases the circulation and gives activity and animation to every part; but, along with this general influence it displays, it possesses secondary qualities no less useful. From an acid forming one of its constituent principles, it is particularly antiseptic, or good against a putrescent tendency in habit, and, as such, is highly beneficial in all putrid states of body. The stimulus of this liquor, like that of all other intoxicating beverage, is of a very temporary nature, subsiding so soon as its action on the stomach is over. Hence, its intoxicating powers are increased by the empty state of this organ, and its influence can even be counteracted entirely by simply unloading it. The excessive use of wine, however, is always attended with hurtful consequences.

The nervous system particularly suffers, and those quick feelings and sensations that fine part of the frame termed the nerves is intended to possess, become dull, blunted, and incapable of conveying the usual impressions. Its temporary influence is still more powerful; for during the few hours of intoxication apparent insensibility ensues, and a tendency to palsy and apoplexy is conspicuous. This real state of temporary disease is to be alleviated by a cool air, a proper posture, with the head raised, and the removal of all pressure from the body, with the free use of diluent liquors.

The consequence of intoxication is a deep and sound sleep, awaking from which the body feels weak and tremulous: the stomach is much disordered by a superabundant acid, which often requires the use of absorbents to remove it; at least twenty-four hours are necessary before the body is restored to its ordinary health.

The use of wine should be confined to the more advanced stage of life. Water is the proper beverage of youth as long as the constitution retains its soundness and vigour; but, as the progress of time weakens the powers of the frame, or temporary causes induce the same effect, then an indulgence in wine and other inebriating liquors, to a certain extent, becomes necessary. But, in addition to the various effects arising from wine, as an inebriating liquor, its adulteration often renders it particularly dangerous. All white wines are generally fined by some addition of lead; and a liquor impregnated with this poison is thus introduced into the body. Hence home-made wines often acquire a tinge of copper from the brass cocks that are fixed to the vessels that contain them; and the red wines are generally coloured by some austere astringent substances. Various tests are employed to detect the adulteration of wine; but in the common use of it at

table we have only our taste to direct us in judging of its quality. If much given to it, we must, therefore, submit to all the inconvenience that may arise from the frauds practised by the dealers in the article.

After wine, follows a beverage which we term *Ardent Spirits.* As wine is formed by the process of fermentation, ardent spirits require in addition to this a second process, or distillation. The principles of this composition consist of alcohol, water, and an empyreumatic oil; and the less of this oil that is present in it, the purer it is considered as a spirit. Proof spirit, which is the standard of this composition, is made up of fifty-five parts of alcohol and sixty-five parts of water; but rectified spirits should contain no more of the latter than five parts.

The intoxication that attends the use of ardent spirits is well known, and their powers

are increased when distilled with spices and aromatics. They are best taken to prevent the noxious influence of cold and moisture; and, though in general considered useful after strong or oily food, this is more a popular prejudice than founded on just principles. Rigid or dry constitutions should be by no means indulged in this beverage. Relaxed habits will receive a certain temporary tone and vigour from their use; but this should also be under considerable limitation. In some circumstances ardent spirits are powerful antiseptics; and in a moist cold atmosphere, or where pestilential vapours prevail, their use will be attended with some good consequences.

The certain effects of the habitual use of ardent spirits are to occasion a destruction of the principal organs, particularly of the liver, and along with this to occasion a dull torpid state of the nerves, which ends in a general debility and relaxation of the system.

Next to ardent spirits come to be noticed *Malt Liquors*, which are composed of water, malt, and hops. They are, however, known under two species of beer, or porter, and ale; and the species chiefly differ in the mode of preparing the malt, the proportion of hops, and in the degree of fermentation. The addition of the hop is highly useful, as counteracting the effects of the mucilage, and preventing the tendency to flatulence and diarrhœa, which is apt to occur where it is not used. The degree of fermentation occasions a great variety in malt liquors; for some are only half fermented, as the Dantzic, or black beer; others are more than fermented, as the Burton and other strong ales.

The more malt liquor is deprived of its fixed air before being used, the more safely it comes to be exhibited; though, bottled, and in the gaseous state, it is often useful as a medicine.

Malt liquor forms the proper wine of this country; and if deprived of its fixed air and well hopped, it is both nourishing and wholesome. It is more fitted for the laborious and active than the indolent and nervous, and will be found on the whole to agree well where the stomach and bowels are in a healthy state.

From fermented and distilled liquors we come to those that are more purely diluent; the first of which is *Tea*.

The leaves of this shrub are the part used; and their infusion is evidently of a narcotic nature; but so slight, that it will only shew its effects as a narcotic where the nervous system is either naturally very irritable or rendered so by disease. The proofs of this narcotic nature have been subjected to experiment by the late ingenious Dr. Cullen, who has argued upon their deleterious effects as an article of diet; and in

farther confirmation of the same opinion, the increase of nervous diseases, according to the bills of mortality, has corresponded annually in proportion to the increased consumption of this article. But though these facts certainly deserve attention, we are convinced that the use of tea, in a moderate proportion, joined with a due quantity of solid nourishment, will never be attended with any hurtful consequences, though some circumstances should be attended to in its use, as a proper preventive measure where it is indulged in.

1. The first is, that the infusion be weak. This is the practice of the Chinese, who always prefer a weak beverage, of which habit has introduced with them the propriety.

2. The second is, the kind of tea employed; for the Bohea, or the shrub in its native state, is preferable to the green, or the unripe pro-

duction, which has the additional fault of being dried on copper.

3. The articles used with it; for a due proportion of sugar and cream, as correctors of its narcotic tendency, ought never to be omitted.

4. The manner of preparing it; and here boiling is preferable to simple infusion, as dissipating a part of the aroma, in which its narcotic qualities exist.

With these precautions, then, tea will form a proper dietetic beverage, and in this country is preferable to any other. It is more diluent, though less nourishing, than the cocoa. It is less aromatic and drying than the coffee, and it is sufficiently cordial and exhilarating to the nervous and weak, who are fondest of it.

Coffee.

From tea we are led to another dietetic beverage, the infusion of the bean named *Coffee*. The qualities of this production are unfolded by roasting; in the manner of doing which some nicety is required to prevent the loss of its aromatic parts, on which its perfection depends. The consequence of this operation, however, is to render the infusion from it heating and astringent; and it is therefore not suited to particular habits. It is much used on the Continent and the Eastern countries, and the same rage prevails for it there as for tea in this island.

One peculiar quality of coffee noticed by writers, is, its correcting the effects of opium; but this influence it has on opium does not seem to extend to other vegetable poisons. It has likewise been recommended as a medicine in spasmodic asthma, and requires here

to be made of such a strength as to act as a medicine, one ounce of coffee to a cup of water, forming the strength of the infusion. In ordinary use, however, it should not be made very strong; and to correct its astringent tendency, a large proportion of milk and sugar should be conjoined with it.

It has been contended, that the excessive use of opium indulged in by the eastern nations is prevented from shewing its usual narcotic powers by the constant interposition of coffee; for it is their favourite drink the whole of the day. That this may have some effect, we admit; but still, habit, and that tendency which the human constitution has to yield and accommodate itself to circumstances, either in liking or otherwise, more properly explains the little mischief that attends this unhealthy practice.

Chocolate.

The last of the dietetic articles of this class to be mentioned, is *chocolate*. It is not liable to the same objections as the two former, being neither narcotic, heating, nor astringent. It is properly a mild nourishing substance, containing a large proportion of oil; and according to the mode of preparing it, is this oil rendered hurtful to the stomach, or not. To avoid, therefore, rancidity in forming it, and to join with it aromatics to render it light, are the two circumstances to be attended to; and where this takes place, it is the most healthy beverage that can be employed, for all constitutions and habits. It requires less correction than any of the former; and its praises have been sounded as one of the most useful restoratives and aphrodisiacs ever introduced for the use of man. My ingenious friend Doctor Buchan has directed a particular mode of preparing it, with a view that it may sit light on

the stomach, and at the same time lose no part of its nourishing qualities.

In place of these articles of foreign production, particularly tea, it has been common to substitute infusions of the herbs of our own country; and some of these, extolled for their beneficial influence on the nervous sytem, are in use by many. But the objection to them is, that if aromatic, their aromatic quality is too strong, and wants the delicate flavour that gives a preference to tea; and where they are bitter, their bitterness is too much of a harsh and medicinal nature.

Spices, or Condiment.

Having given a cursory view of the different articles of diet, under the head of *Food* and *Drink*, it remains to consider how these are prepared, in order to please the taste, by

certain additions of a saline or aromatic nature, under the denomination of *Spices.*

The first of the saline spices, and the most general in use, is

Sea Salt.

This substance may be considered as a necessary ingredient in the food, and as necessary to the health of the human frame, in a due proportion, as the food itself. It assists the digestion in a remarkable degree, disposes the glutinous parts to an easier solution, and accelerates the motion of the organs concerned in the preparation of the aliment, so as to perfect that operation. It corrects the principles in vegetable matter, which, by an excess in their use, may prove hurtful to the habit; and, when used itself in a similar excess, it proves equally the cause of disease, by thinning the solids and giving a disposition to scurvy.

Sugar.

Sugar is an article, which, though not essentially necessary like the former, is perhaps nearly as much employed in the preparation of our aliment. Like every saline substance, its excessive use must be hurtful, by thinning both the solids and fluids, and disposing to those diseases which are connected with that morbid state. It is safest used in the cane state, as by the negroes, under which they generally get fat and have their health improved; but in Europe, where it is taken in the form of a pure salt, it loses many of its native wholesome qualities, and acquires others that are rather pernicious.

The common opinion, that it injures the teeth, seems rather doubtful, except in so far as it has affected the constitution previously, in the manner already stated.

Honey.

Honey, in its properties, much resembles sugar, but is peculiar in its effects on some constitutions, which renders it unsafe with many, and apt to produce flatulence and disorders of the stomach and bowels. It is an useful laxative to those with whom it agrees, and particularly where there is a disposition to calculous complaints.

Peppers.

The different kinds of pepper, though heating, are the most innocent of all the spices; and they form an useful addition to all indigestible food, whether animal or vegetable, by increasing the powers of the stomach to dissolve it. They are best used in the form of powder, by which their virtues are more fully imparted; and they are also an useful medicine in stomach complaints, attended with a viscid secretion, flatulence, pain of head, &c. In

such cases they may be swallowed whole, in six or eight grains at a time.

The finer warm aromatics are not altogether fitted for common use, from their heat and pungency. To some kinds of food their increased stimulus is necessary. *Cubebs* are less pungent than pepper, though their heating quality in stews is more permanent. *Cardamoms* are distinguished by their grateful aromatic smell. *Vanilla* is chiefly employed in chocolate, to render it light and digestible, and to impart to it a particular flavour. *Cloves* are highly exceptionable, from their very heating nature. *Mace* and *Nutmegs* are less so, and supposed to possess qualities which render them useful in diarrhœa and dysentery.

3. *Of Exercise.*

That "man is born to trouble as the sparks fly upward," is a truth first taught us by reli-

gious precept, and afterwards confirmed by every day's increasing experience: this state naturally impels us to action, in order to avoid or lessen the evils entailed on our destiny; but, like most of the punishments inflicted by the award of Providence, this curse carries with it also a blessing. Exercise therefore forms, as it were, a necessary appendage to our existence, without which man cannot live, nor health be procured. The more we examine the human constitution, the more the powers of man seem fitted for action. Indolence and inactivity are with him the certain source of disease, and temperance and exercise are his surest guardians of health.

The general effects of exercise are to increase the strength of the body by preserving the vigour of circulation, and thus expediting all the secretions and excretions, by which the vital stream is preserved in a pure and healthy

state, and all obstructions prevented or done away.

Exercise, though thus attended with the best consequences, should yet be kept within due bounds, and these proportioned to the habits of life and the constitution of the patient.

Repletion, or fulness of habit, is evidently an enemy to it in a great degree: the sudden use of it, or violent exertion quickly applied, is mostly to be guarded against, and a regular equable manner of applying it should be pursued; and with similar precaution, after it, exposure to cold should be equally avoided.

Exercise has been properly divided into two heads, the active and the passive.

The former of these is adapted to the

young, vigorous, and athletic; the latter better suits the old, the invalid, and the infirm.

Exercise should be regulated, both in its time and duration, by a variety of circumstances. It should rather precede than follow the reception of food, and it never should be carried so far for the purposes of health as to induce much fatigue. Every person will be able to judge of the degree which does him good, and beyond this point he should not carry it.

Every exercise to which we are accustomed will be found best to agree with us; and it should be often gently increased in the progress, and gradually discontinued. In the open air it is most useful; but this must be regulated often by the state of the weather; but all violent exercises are best performed in that situation.

Exercise and labour should never be considered as the same things; otherwise the object of health is lost sight of, which is very applicable to the former. Active persons are particularly attached to exercise, and indeed they cannot do without it: with them every movement indicates action, and exertion forms the pleasure of their existence.

Exercise should be equally avoided both before and after a meal. Before a meal it dissipates too much the fluids concerned in the preparation and digestion of the food; and immediately after a meal it suspends altogether this process. Much, however, of the mischief from this source will be got the better of by custom; though still every thing that savours of great exertion should be avoided, and only the milder kinds of exercise put in effect.

The first kind of exercise that claims to be

noticed, is walking; and perhaps it is of all others the most useful and healthy. Both body and mind are enlivened by it, and it is highly serviceable when carried to an extreme in many nervous diseases. The most proper situation for walking is the country, in serene and dry weather; and the situation of the latter should be particularly studied, in the use of this exercise, to give it proper effect. Even in the country, damp marshy ground is to be avoided; and walking here will have more effect on one accustomed to a town, than on others not confined to this situation.

Running is an exercise of much exertion, and is particularly to be avoided when a tendency prevails to complaints of the chest, or there is much fulness of habit.

The same observation may be made on dancing, which is generally carried to excess;

and thus what is meant to be a gentle exercise is converted to a source of disease. Where it is also generally performed in heated rooms, and under a confined and vitiated atmosphere, the worst effects are known to follow this favourite indulgence.

Of the passive exercises, riding is one of the most conducive to health. Riding in a carriage, as being the most gentle, is best adapted to the invalid and aged: it promotes the circulation in an easy agreeable manner; and, if the carriage be properly suspended, and not too nicely, the motion will be sufficiently strong for every purpose. It has also one farther advantage where a close carriage is used; that it may be either considered as an exercise in the open air, when the windows are let down, or it may be viewed as an exercise at home, where the carriage is close and confined.

Riding on horseback is an exercise attended with considerable exertion both of mind and body; it is therefore well suited to the healthy, young, and active; and it is also particularly beneficial where obstructions exist in any of the organs. Hence it has been strongly recommended in consumptive complaints, from the days of Sydenham to the present time. This admirable practitioner, in affections of this nature, considered it as a *specific*. It should be used in this case at least for three hours every day. All visceral obstructions, by the increased circulation it excites, are benefited by it; but some caution is necessary where they are of very long standing, as inflammation may be produced where the exertion is too great.

Sailing is a passive exercise, well suited to a state of disease, especially where the stomach or lungs are affected. It produces at first much sickness and nausea, and occasions the stomach and adjacent organs to be completely

unloaded: bilious complaints, therefore, are removed by it; and, by its producing an increased discharge by the skin, it is no less useful in consumption and spitting of blood, by thus lessening the determination to the lungs.

Reading aloud, singing, and other exercises of the voice, contribute much to influence the state of the digestive organs and the lungs; and when other exercises cannot be used, they form an useful substitute.

Wind instruments have been much condemned, and with great propriety; as being too powerful in the exertion they occasion, by hurrying the circulation in the lungs.

Exercise, then, whatever be its kind, is highly useful to the constitution. Man, as we formerly observed, is born to labour, and fitted by his form and habit for it. Labour is the

parent of health, and we may even add, of happiness. Idleness is not only the source of disease, but the origin of crimes. Let not the poor countryman complain of the extent of his labour, or the hardness of his fare; he enjoys happiness a thousand times more than the inhabitant of the gilded palace, who rolls in luxury, and is courted by every enticement to repose.

In taking exercise, much attention should be paid to the ease and freedom of dress, particularly of the neck and joints, that the circulation may not be confined at any one part, but be permitted to move on every where with freedom and ease.

In violent exercises, particularly that of riding on horseback, much advantage will be derived from supporting the bowels by a broad belt, the pressure of which must be regulated by circumstances.

Exercise, however, is more especially useful in the temperate and cold climates. It is less necessary in the warm ones; and, instead of it, friction is generally substituted, which is no less useful in every situation.

Friction is employed in different ways, either with the naked hand, with flannel, or with a brush. It has been a practice peculiar to the eastern nations from time immemorial, and experience has shewn it to be attended with the best consequences to the general health.

Every part of the body may be subjected to this operation, but the belly and spine are the chief parts that require it;—the extremities only in cases of age or disease. The several postures of the body may be even mentioned as different species of exercise; but they should be occasionally changed, and one posture not

continued too long, otherwise the intended effect is lost.

On the whole, of the active exercises, walking may be considered as the best and most natural, where it is properly employed, and not carried so far as greatly to fatigue. Of the passive exercises, friction is equally useful. It is best at night, as its effects are favoured by the after retirement to bed, where a free perspiration of the parts is apt to ensue; and the state of the atmosphere should be studied while performing this operation, and no exposure of the body take place to cold or moisture, so as to counteract the free circulation induced by it.

But while the exercise of the body is thus provided for, that of the mind is no less necessary; that active irritable principle, which governs our actions and our motions, requires

to be kept in perpetual change of thought and reflection, to prevent that fatiguing exertion which attends its long continuance on one object or turn of thought. Like the body, the mind is strengthened by exertion; but that exertion, if too severe, wonderfully affects the corporeal faculties. Constant profound thinkers, therefore, soon expend the mental powers, and either die the victims of melancholy, or fall into the more deplorable state of ideotism. To avoid these evils, study should be carried on by starts, and any extreme thinking should be avoided, and the ideas on which we have strongly dwelt for the time should be afterwards changed by variety of games and amusements.

4. Of Sleep and Watching.

As the materials of which we are formed waste and require a constant supply, so this waste chiefly takes place while the powers of

the body exert their activity, and a state of watchfulness prevails. To repair this waste, an intermission of the activity of the system is necessary; and this intermission we know by the name of *Sleep*. Sleep, then, is a suspension of the more active functions, and is essential to the body, in order to repair, at times, her exhausted powers. During sleep the vital functions only are awake. They are uniformly and steadily performed, and previous to this state a languor of the senses comes over us, and all those leading circumstances which indicate something like the annihilation of existence. In this passive situation, the senses acquire new energy and vigour, to be exerted on awaking from this supineness; and it is this additional vigour, rising to a certain height, that occasions sleep to be thrown off, and the state of watchfulness to return. Sleep may be considered as an interruption to the nervous fluid through the brain, occasioned by its

weakened action or collapse; and all the causes that induce sleep shew this to be the case. Hence sleep will be induced by whatever weakens, and is prevented by whatever excites or stimulates the system.

Dreams are the effect of external sensations acting upon the brain, when the sleep is unsound, and seldom occur during the first hours of this state. Ideas which have lately occupied the mind are the chief objects of our dreams, and they are apt to occur with the sickly and intemperate, more than with the healthy and the regular.

Tranquillity of mind and body is a necessary attendant on the enjoyment of sleep, and whatever interrupts this, banishes this grateful indulgence. None have more influence than affections of the mind of a depressing nature. Hence it flies the individual occupied with grief; or, in the beautiful language of the poet,

" Tir'd Nature's sweet restorer, balmy Sleep,
" He, like the world, his ready visits pays where
" fortune smiles;
" The wretched he forsakes, and lights on lids unsul-
" lied with a tear."

The proper time for sleep is pointed out by nature, when the beams of day are withdrawn; but nature does not require a lengthened period of the whole night, but is satisfied with a moderate proportion of it; and this must be regulated by the circumstances of the employment during the day. From six to eight hours form a proper medium. The want of sleep, beyond a certain time, evidently consumes the spirits, and debilitates the whole frame.

Nor can it be easily enjoyed for some time where the want of it takes place to any great degree. The temper also particularly suffers from it. Too much sleep is no less prejudicial to the health. The body becomes by it torpid

and inactive, and nervous complaints are the consequence. Children, however, should be indulged to any degree of it, as no stupor will ensue with them. So gratifying is sleep, that it gives relief to the sharpest afflictions, and may be considered as the chief solace of the unfortunate and wretched.

The hour of going to bed ought never to be too late, and on first going to bed sleep is always sounder and most refreshing.

Towards the proper enjoyment of sleep, many circumstances are necessary.

1. The first is, the early retiring to bed.

2. The second is, not oppressing the stomach, or giving the powers of digestion too much to do.

3. The third is, the proper posture of lying in bed; which should be on one side, with all the muscles as much as possible relaxed.

4. The fourth is the proper temperature of the body; and, to preserve its due heat, a sufficient quantity of clothes should be used.

5. The fifth is, that all pressure from clothes, and other articles of dress, should be removed before going to bed. And,

6. The sixth is, that the exclusion of light should entirely take place.

With these precautions sleep will be properly enjoyed, the strength of the body renewed, and the faculties of the mind and body rendered spirited and active, so soon as the return of day arrives.

6. Of the Secretions and Excretions.

The aliment we take in, it has clearly been seen, in consequence of the process of digestion, is prepared into nourishment, and thus converted to supply the different wants of the system. That part which is not convertible for the supply of these wants, passes off; and the nourishment itself, when it has supplied its different offices, becomes unfit to be longer retained, and is carried out of the body in a changed state. This forms the subject of the secretions and excretions of the body; a subject of the first importance to the well-being of the system, and on a proper attention to which the success of the physician, or the art of healing, depends.

Thus, from the bowels is discharged the mass of thick feculent matter, the refuse of the food.

By the kidnies passes off the more watery, oily, and saline parts, the retention of which would produce acrimony in the habit.

By the skin is evacuated a similar discharge, but of a still more subtile kind, in consequence of which a tendency to putrefaction in the habit is prevented. These are the three great outlets of the body, by which its health and well-being are preserved. Disease is never formed without a change in the state of these discharges, and never removed without the increased action of one or other of them. This forms a cue for the conduct of the physician, in his treatment of disease; and it is in following the steps of nature in this respect, that his success in his art, or in the proper treatment of disease, will depend.

With most individuals, a preference in favour of one discharge more than another seems

to take place, and this should be always inquired into and studied.

1. *Discharge by Stool.*

The regular and moderate state of this discharge is of the first importance to health. It should neither be expelled too quick, after the reception of food, nor should the latter be retained too long, after the nourishment is separated from it. A stool once a day is mentioned as the regular and standard rule; but the quantity and quality of the food must at the same time greatly determine this. Hence it will vary in different persons, whose health is equally good, as connected with their special circumstances. Some peculiar constitutions may be noticed, that are known only to evacuate once in a week or fortnight: but this peculiarity can only be barely noticed, and does not admit of any explanation; though a corruption of the fluids, in the end, must be the consequence of

this slow state of the bowels, in such constitutions; and, when attacked by disease, the heated mass of fluids must render the morbid cause much more active.

A warm atmosphere and indolent life are unfavourable to this discharge; and wherever it is irregular, it should be carefully counteracted by an uniform practice of going to stool daily at a certain hour, either of the morning or evening. Much depends on the diet for the regulating of this discharge: a dry hard diet is always unfavourable to it; a moist and soft one is the reverse: and, by observing these two extremes, a proper regulation may so be formed in this respect, that the bowels may always have an uniform and regular action, in clearing themselves of their contents. Sometimes, however, costiveness is an hereditary disease, or it may be brought on by weakness, in consequence of previous affections debilitating

the sytem. These causes are to be attended to, and as far as possible corrected.

With respect to the appearance of the matter discharged, this should never be too dry nor too liquid. In the strong and athletic, who use much exercise, it often acquires this very hardened state, without any injury to the general health; and thus the whole of the nourishing part would seem to be completely taken up in such habits. A hardened state of excrement often induces painful headaches, and not unfrequently fever. It is very prejudicial to all those who are subject to stomach complaints, particularly the hysterical and hypochondriacal constitutions. The delay of this natural discharge, or counteracting the efforts when actually taking place, is attended with serious and often fatal consequences. By resisting the action of the bowels, the canal becomes distended with its contents; a pres-

sure of the blood-vessels takes place; and the piles, a painful and loathsome disease, is apt to be formed. The natural inclination once lost, does not recur for some time, and the bowels are provoked in vain to resume their action till another day.

Looseness is again generally the effect of immoderate eating; part of the food not coming to be digested, passes off in this way, and nature thus relieves herself of a load she has properly no use for. Thus great eaters are generally thin and emaciated, and possess less strength than those who take a moderate meal, where it is properly concocted. The stools, then, may be considered as enabling us to form a proper judgment of the quantity and quality of the aliment, as also of the state of the digestion and assimilation.

To render the digestion complete, and thus

produce a proper and healthy discharge by stool, many circumstances require to be attended to.

1. The first is a proper proportion of exercise, to invigorate the system, and promote the force of the circulation.

2. The second is a due quantity of drink, sufficient to dilute our solid food.

3. The proper choice of our food; neither too solid on the one hand, nor too diluent on the other; and so prepared as to answer the same purpose.

4. Avoiding excess of sleep, as promoting too much the discharge by the skin, at the expense of that by the bowels.

2. *Discharge by Urine.*

This discharge is meant to take place oftener than the former, and between it and the skin a balance seems to prevail in the quantity poured out. The fluid separated here is of a thin straw colour, somewhat yellowish, with a white loose sediment, and, on being first discharged it has no disagreeable smell: all which marks shew whether the habit producing it is healthy or not. This discharge is much affected by the influence of constitution, climate, and season. Some constitutions naturally produce a greater quantity than others. In warm climates it is much less than in the colder regions; and, in the same way, the approach of summer diminishes its quantity, which is increased again on the return of winter. It is only from the morning appearance of this fluid that we are to judge of the state of the individual's health, and not from the accidental change to which it is subjected

in the course of the day; for no fluid is so apt to be varied in its appearance and qualities from casual circumstances. The prognostications by this fluid have opened a wide field for empyricism, and water doctors have been noted, at every period of civilized society, for imposing on the credulity of mankind. There is no doubt that some judgment may be drawn from this fluid, at times. The urine of hypochondriacs, and also of hysterical patients, we know to be remarkably clear and limpid, and likewise in great quantity. In weak habits it is found to be a good deal foamy, and to retain its froth for a considerable time. Whatever stimulates the system most, occasions the urine to be of a red colour, and to deposit a brick-coloured sediment; and even the colour of the urine may be considered as indicating, according as it is high or otherwise, the degree of vigour in the system. The want of a sediment entirely, after long standing, is a proof of great weakness.

It is not possible to ascertain, with precision, the exact quantity of this discharge daily, but two circumstances will tend much to determine it: the quantity of drink used, and the degree of perspiration. Where the discharge is deficient, it may always be promoted by the use of thin diluent liquids, with moderate exercise, and the addition of mild acids in diet; and as many diseases arise from this discharge being too deficient, it ought to be carefully promoted in all such cases. Vigour of habit is always attended with a moderate discharge of this excretion; relaxation and weakness shew a preternatural quantity of it. Exercise tends also to lessen its quantity, while cold and moisture increase it.

A morbid discharge of urine forms a peculiar disease, termed *diabetes*, which proves generally of a fatal tendency. The parts, also, connected with this discharge, are more liable

to be affected by disease than any other. Hence we cannot be too careful in attending, not to retain it too long when once solicited, nor to make it too often before the bladder is fully distended. By the former, inflammation and distension of the bladder is apt to arise; by the latter, the organ becomes narrowed, thickened, and contracted, and loses part of its conical and natural size. Retention, by occasioning a deposition of sediment, is apt to lay the foundation of calculus, or stone.

3. *Discharge by the Skin.*

The present discharge differs from the two former, in being uninterrupted, and may be considered as equally important. Day and night it is constantly discharged through innumerable pores, which are the openings of small vessels, every where spread on the surface; three thousand of which occupy no more space, according to computation, than

one inch. By this discharge we are freed from all impurities of a thin acrid nature, and none of them have such an immediate effect as this, on the general health and spirits. From three to four pounds is the medium calculation of this discharge. It is most abundant during the night, as being favoured by a calm uniform circulation, and the greater heat and mildness of the atmosphere.

The first mark of every febrile disease is the suppression of this discharge; and the first means of relief, whether induced by nature or art, is the opening of this discharge. It has also a powerful influence on the state of the stomach, and between it and this organ alternations of health and disease shew themselves. A regular and vigorous perspiration is a sure mark of health, and by attending to the state of it, we shall sooner detect and redress derangements of health, than by any other cri-

terion we can go by. But this discharge, though so necessary to the well-being of the body, is not so uniform as the others. It differs at different times of the day, in the same individual, and is not equally active at all hours. A full stomach lessens it; but when digestion is completed, it is most abundant. The season also, as observed, has great effect upon it. A warm season or climate promotes it in a rapid manner, and checks that by the urine and bowels in an equal proportion. In order to keep it as regular as possible, attention should be paid both to the state of clothing and the nature of our aliment. The first should preserve us as much as possible in an uniform atmosphere, and the second should be of that nature to keep up a proper vigour of circulation, as being necessary to promote it. Hence all circumstances that tend to interrupt it should be avoided; and those enumerated as effecting this, are,

1. Violent pain. 2. Obstruction of small vessels from oily matters attached to the skin. 3. Severe cold, especially at night; and the interference of other objects, as the process of digestion, &c.

From the importance of this discharge, it should claim, with every individual, the most particular attention; and all those means by which it may be promoted should be constantly held in view. These means are, extension of the muscles of the different parts of the body, especially of the extremities, whether by simple movement or expansion of them, or by means of bodily exercise: by this action the circulation of the fluids is promoted, and thus their determination to the skin accelerated. The warm bath has here a similar influence, and answers the same effect, by what may be considered as a passive operation. The use of mild sudorifics is equally efficacious, parti-

cularly warm diluent fluids; but all such expedients, except exercise, are more proper for removing states of disease, where this discharge is interrupted, than for merely preserving health.

Sweat differs from the usual perspiration, both in the nature and quantity of the matter thrown out. Its effect, therefore, is always to weaken; and, though a useful means of carrying off most acute maladies from the body, yet, if carried too far and rendered habitual, it is apt to lay the foundation of consumption, and other evils of a serious nature. It may indeed, however, be considered as a proper outlet for purifying the habit, and much skill is requisite to manage it properly with this view. The removal from too heated to too cold an atmosphere, is always dangerous, as suddenly checking perspiration. But custom will do much in this respect, in preventing

our suffering on this head. No practice is so proper, as a preventative from vicissitudes of heat and cold, as the daily washing with cold water. By this the body becomes braced and hardened; and it should be a habit early begun and regularly continued, in order to induce the good effects to be expected from it. When we consider the consequence that sleep has in relaxing and debilitating the body, the morning is pointed out as the proper time for this operation.

The nature of the food cannot fail to have a sensible influence in the quantity of the discharge by the skin. The more thin and attenuating the aliment is, the more will it be of a nature fit to pass off by this excretion. Gross oily food, and such as is of a viscid nature, from its not passing off readily in this way, too often lays the foundation of cutaneous diseases, by favouring obstructions of the small vessels of the skin.

All the depressing passions, by lessening the vigour of circulation, lessen also the evacuation from the surface, so necessary to the health of the frame; while the enlivening ones produce a contrary effect.

Exercise and cleanliness are equally useful in this view. The rules, in respect to this discharge, may be shortly summed up: to keep the skin clean and moist, by means of attention to dress, exercise, and aliment; so that the quantity perspired will require a change of linen every twenty-four hours.

Saliva.

As the digestion of the food is accomplished chiefly by the powers of the stomach, so this process is favoured by its mixture with certain fluids in its passage to the organ. The chief of these fluids is the saliva, or secretion from the salivary gland, known by the name

of *Spittle*. The quantity of this discharge daily thrown into the stomach, is very considerable; and being evidently necessary to the preparation of the aliment, it should not be uselessly thrown away or expended. Hence the custom of using tobacco, particularly smoking, which occasions such a waste of this liquor, ought to be indulged only under strict limitations.

In constitutions where the fibre is lean and dry, its use must be attended with much injury to the general health; and by the narcotic effects of the plant, besides its irritation on the saliva, the injury will even be increased by it. But when the habit, again, is full of juices, as in the corpulent and phlegmatic, and where the acme of life, or middle age, is at the same time past, then these inconveniences from taking tobacco will by no means so readily occur: on the contrary, if moderately indulged in,

it will be useful, by dissipating part of the redundant fluids; and its utility will be even greater, if indulged in to counteract the effects of a moist, cold atmosphere. The best time to smoke is when digestion is complete, not immediately after a meal; and the process should be favoured by the use of diluent liquors, in the time of it, to supply the waste that is taking place. The length of the tube it is drawn through, is an advantage, to lessen the acrimony of the exhalation; and any local irritation on the mouth, tongue, or cheeks, from the mechanical action of the pipe, is soon got the better of by custom.

Of the Nasal Mucus.

This discharge is intended properly to moisten the surface of the nostrils, and preserve them in that state which is necessary to make them convey the impressions they are intended to receive. An additional stimulus, therefore, such

as snuff, to render this more abundant than it ought to be, can only produce irritation, and the consequences which must arise from such a cause. The greater number of snuff-takers, therefore, do themselves much injury by this practice; and it is only in those cases where an artificial issue or drain from the head is wanted, that it ought to be indulged in. Hence, in moist habits, subject to defluxions in the eyes, or pains of the head, a moderate use of snuff will be of much advantage; while in the irritable, weak, and consumptive, it will give rise, from its peculiar narcotic stimulus, applied to a situation so near to the brain, to alarming diseases. It has been considered in many cases as a cause of palsy, and used to be mentioned as such, in his Lectures, by the late celebrated Dr. Cullen. But while deterring his readers from its use, the box lay generally before the Doctor, who jocularly remarked, in spite of the danger of this disease, he found

himself compelled from habit to indulge the practice, which he generally reprobated at the same time in strong terms; a proof of the little influence of good advice on the mind, where danger does not at the moment press upon us. Another bad effect of snuffing, is that of stopping the nostrils; it impedes the respiration, and gives the lungs more to do. By passing also into the stomach, it is the source with many of much uneasiness, pain, and flatulence in that organ. From this view, reason will point out what is best; habit and gratification, what is most pleasing.

Of the Secretion of the Ear.

This secretion renders the organ, when in moderate quantity, more acute for receiving the impressions it is intended to convey. But it sometimes hardens and accumulates, so as to render deafness the consequence. It then requires to be washed out with soap and warm

water, and oil used as a substitute, to prevent the same accident happening again. Where the secretion, on the contrary, is thin and acrid, daily washing with cold water will be of service. Should insects get into this cavity, oil forms the proper remedy for destroying them.

Of Hæmorrhage.

As the blood is the most elaborate of all the fluids, so it is the most useful for preserving the health of the system. The loss of it is therefore more severely felt than that of any other; and this loss never takes place but as a consequence of disease. In the male, blood is apt to appear with piles, and also from the nose. In both these cases it is dangerous to repress it suddenly; for though weakening, in the mean time it is either connected with a general fulness of habit or of the part. Both these states must be removed before the discharge can be safely got the better of. Nature,

therefore, should be allowed to take her own course, and only prevented from going to extremes. The same may be said of the menses in women; and to them the same observation equally applies.

Of Retention of Milk.

The same delicate attention that is necessary to the former discharges, is equally essential here. This secretion, in a nursing female, is readily affected by the slightest causes, in respect to diet, situation, or passions of mind. The consequence of this is, that a foundation is not only laid for morbid affections in the organ; but the general health is apt to be deranged by the influence it possesses with the whole of the system. Not unfrequently death has arisen from this cause.

Of the Sexual Communication.

The last of the secretions, and one of the

first importance to the health of the system, is that which regards the intercourse between the sexes. It is more than any other connected with the vital principle, and therefore by its excess enfeebles both mind and body, and powerfully affects the nervous system. Where retained, this secretion tends to give tone and vigour to the habit; and where early indulged in, the body never acquires that strength and perfection its retention would otherwise produce. The peculiar effect of this secretion, we observed, is to affect the nerves. Hence its waste is attended with a general debility, relaxation, and weakness, which is preceded by a sort of convulsion, or disorder of the whole frame.

But though the excess of this secretion is hurtful, its moderate indulgence may be necessary to health. Nature has created nothing in vain; and this secretion is granted for the best

and most useful of purposes; to perpetuate the species of the individual in whom it is prepared. It is only from the effects produced we are to judge of its excess or imprudent use, and to regulate our opinion on the subject, the following conclusion may be drawn:—

That the dissipation of this secretion is necessarily made to a certain extent, to preserve even the health and well-being of the body. But whenever the mind and body feel much debility and weakness after this excretion, it is too much for the constitution of the individual, and ought to be sparingly attempted.

But, to bring the rules on this subject still nearer to a point, we may in general remark, that it is hurtful in all invalids, and those of a debilitated habit, though in many of these a strong propensity to it prevails. It is equally

so to the aged, whose already-enfeebled frame cannot support an excretion attended with a violent convulsive state of the whole frame. The early period of life, or that previous to maturity, is equally injured by this gratification, and both growth and strength are prevented by it.

Nor are habits, in whom a paucity of fluids prevails, more fitted for this violent exertion; while those, on the contrary, in whom the fluids abound, where a moisture, softness, and pliability, prevail, may indulge in this passion. It is an act which should never be performed when there is any other fever in the blood. Hence it should not accompany the hour of intoxication, when the individual is almost unconscious of his existence. Nor should it immediately, for the same reason, follow a meal, nor be a conclusion to violent exercise. Whatever tends to debilitate the frame, renders it unfit

to undergo the enjoyment of this passion. Hence even the season will have an influence; and though heat gives, as it is alleged, like every other exciting power, a desire for the gratification of this passion, it should not be indulged equally in summer as in the colder months.

The morbid effects of the excess of this passion on the body, may be reduced to three heads: 1. As it influences the state of the nerves;—2. As it deranges the vigour of the mind;—and, 3. As it produces a waste of a peculiar secretion.

With respect to the first, the convulsive motions excited by it, in the whole frame, are attended often with such serious consequences as to have been experienced fatal. Hence the system cannot be thrown into this violent state of excitement without weakening the

nerves, and inducing a degree of relaxation, which can only be repaired by the after conduct and discretion of the individual. This is even felt in a violent degree, where nature unloads herself without any exertion taking place. Spasm, in this case, always follows, and leaves the body in a debilitated situation: so true is the adage ever found—

"Læta venire Venus tristis abire solet."

OVID.

The second effect, or the influence of this indulgence on the mind, is no less important. No violent affection of the nerves can indeed take place without the mind suffering in an equal degree; but here it displays a peculiar weakening power. The faculties are at once suspended, as it were, in the contemplation of this passion, and, from a certain pride of human nature, the object of the individual is to do it well, and consequently to use the exertion to

an extreme length. Hence where a suspicion has arisen of an unfitness for the proper performance of this passion, on the minds of some men, such has been its power over the understanding, and such the infixed despondency produced by the idea, that suicide has been known to follow this unhappy train of thought. At all times it produces a frame of mind that is wrought up to the highest pitch of excitement; and the collapse or succeeding depression must correspond to the previous train of high-wrought elevation.

The third effect, or the dissipation of this fluid itself, comes last into consideration As this secretion is of that elaborate kind, which passes through a long and minute circulation of vessels, it seems prepared by Nature with uncommon care, and pent up in its reservoirs, which are small, for a very frugal expenditure. When we consider also, that by this secretion, mus-

cular strength and energy are afforded to the machine, that it conveys animation and vivacity, the loss of it must be attended, where excessive, with the most debilitating effects to the whole frame. The ardour of mind is destroyed by the waste of it: every thing manly and noble is suspended in the mind of the careless spendthrift of this natural tonic and restorative; and an improper loss of it, especially at an early period, produces years of disgust and painful reflexion. Melancholy and hypochondriasm are the constant attendants of this unhappy state, which cannot be too much guarded against by early prudence and discretion. Weakness of the eyes, and dimness of vision, is no less frequent from the same cause; and in its worst situations, the peculiar species of consumption, termed the *Tabes Dorsalis,* proves fatal to the deluded votary of pleasure and excessive gratification. At the same time, it is clear, that Nature has provided many with abundant supplies of this

kind, who can long transgress her laws with impunity ; but, no one can exceed the natural instinct, without feeling its effects in time, and sooner or later suffering the price of their temerity. Peculiar acrimonies of habit often dispose to this indulgence, without any natural propensity prevailing. Thus, the hypochondriac and consumptive are often misled in this way. Where the mind becomes much habituated to brood on ideas of this nature, it is well known, they cannot be broken off, even in the period of sleep. The consequent loss of this secretion then is a serious evil, as it increases with habit, and cannot generally be restrained. It is more destructive than the worst of practices which are within our power, because most may be got the better of by the influence of reason and reflexion; but, this, by continuing, soon prepares the exhausted sufferer for the grave.

Regularity in this communication is, per-

haps, more necessary than in any other, and the constitution will become habituated to what is established, if not too much for it, as a regular plan. The voluptuary, by thus economising his dissipation, will enjoy a greater share of it, than by an intemperate indulgence, without any of the bad consequences that follow the latter. At the same time it is not to be concealed that too rigid an abstinence from this propensity, in some rare cases, has been productive of disease as well as its imprudent gratification. Nature points out at all times what is proper; and if we were to live a life of nature, we would only have to follow her dictates, which in this case would be unerring; but artificial excitements are the bane of modern life, and these goad on the constitution where nature has no hand in it. The injuries also to the health, by this imprudence, can only be repaired by avoiding the cause, by a nourishing mild diet affording much supply of food easily

assimilated. No other stimulus should ever be used but what nourishing food affords, and every other will always end in the destruction of the health and vigour of the system. If these means are used by the aged and infirm, they are the certain bane of life. On the whole, moderation is to be more studied here than in any other act of our nature; and it will amply repay our prudence by the health and vigour that will attend our conduct in strictly pursuing it.

7. Of the Passions.

The Passions have been styled, not unaptly, by a number of authors, the gales of life; and from them, in the language of Scripture, may be said to proceed the issues of good and of evil. They are the source of every agreeable and of every painful feeling. They give to the body every source of present enjoyment and distress, and they anticipate the prospect of future bliss or agony. They exhibit scenes the most

diversified, as forming the spring of all our actions, and vary with the varying nature of the constitution or temperament to which they belong. Hail then, ye sources of our joy or woe, interwoven as ye are with the inexplicable part of our existence, and also more than any other part with the principle of life! Let us trace your powerful agency in the changes to which ye subject the corporeal frame—changes for which reason, the only remedy, affords too often but a poor relief.

The mind, the source of all our passions, is clearly in every individual the same. It is that divine emanation, that feature of the divinity within us alike in all. Why, then, in each individual do we find such a difference of conduct under the same director? But it is not the mind from which this difference of action proceeds. It is from the corporeal covering with which it is enveloped, and with whose operations it

is unavoidably entangled. In a frame, which however, is well proportioned, and in which every organ possesses its proper structure and form, in which the animal spirits exist in full quantity, and readily obey every impulse of the soul; in such a habit we are to look for spirit and energy in action, and a natural disposition to virtue. But, where the figure is the reverse to this, where the organs are not proportioned, and cannot perform their functions with pleasure or ease, there the spur of action is deficient, and the soul partakes most commonly of the imperfections of the body.

The understanding, that intellectual eye placed between our desires and external objects, is the only guide of our conduct, and director of our actions. It is this principle which regulates the effect of the impression made from without, and directs it to a good or a bad purpose. Hence, it is of the greatest importance that the senses,

in the first instance, should receive a just impression, in order that the understanding may form a proper criterion to go by.

The seat of the mind has much divided the opinions of the learned of every age; whether confined to the brain, or extended to every part of the frame, has been the subject of dispute. The solution of this question is, perhaps, immaterial; and it is more to the purpose to remark that temperament, is more than any other, the source of the difference of the mental operations of man.

The passions have been properly divided into two kinds, the exciting or enlivening passions, and the depressing ones. They operate on the body either suddenly, or in a slow, progressive, and gradual manner. Death has been known to be the immediate effect of the former; the latter generally produce a gradual decay and consump-

tion. The choleric and sanguine constitutions suffer chiefly from the violent passions. The phlegmatic and melancholic ones, whose sensations are dull, fall victims to those of an opposite kind. The long continuance of one passion, by harassing out the mind, is ever apt to produce bodily disease, and one termination peculiar to the effect of the passions is also apt to arise, viz. incurable mental imbecility.

The cure of mental diseases has at all times formed the most difficult task for the physician, so much so, as to render it proverbial. Thus, in the language of Shakspeare,—" Who can minister to a mind diseased ?" Change of objects, of impressions, and ideas, afford the only means for the guidance of reason, and argument has generally little sway. The early management of the mind, by a proper education, is the best guard against the mischievous

effect of the passions at an after-period. Their control becomes then a habit with the individual, and prevents any excesses which might otherwise spring from their occasional excitement by unforeseen circumstances. Hence it may be laid down, as a leading maxim, "that the control of our passions is an indispensable requisite to the proper enjoyment of health." But, in order to point out the effects of the passions more clearly, it will be necessary to consider each of them separately, and with some minuteness.

The first of the passions, and one we naturally wish to begin with, is *Joy*. It is that state of mind in which there is felt extraordinary pleasure, and in which a high degree of animation takes place. The heart becomes expanded; the circulation is rendered free and vigorous; the eyes sparkle; the nerves feel a sensation connected with complaisance and

mildness. Hence this state is favourable to the enjoyment, and even recovery, of health, where it is languishing under diseases of a slow or rooted nature, and of a depressing kind.

Of this passion, a variety of modifications or degrees occur, under the names of *gaiety, cheerfulness, mirth,* &c. &c. The state of mind produced by this passion may be much favoured by a proper attention to the state of the evacuations, and also to the regulation of diet. The evacuation by the skin is in particular of the first consequence, and the diet should be of easy digestion, of an aperient quality, and in considerable proportion of a vegetable nature. Hence dry air has a considerable influence in producing the state of mind favourable to this passion; and by the circulation being promoted by this benign disposition, a stagnation of the fluids, and conse-

quent tendency to obstruction, is prevented. Excessive joy, however, is often attended with severe evils; instantaneous death has occurred from the immediate and rapid tumult produced on the spirits by its unexpected occurrence.

Wherever, therefore, it is carried so far, though even in a less degree, as to occasion sleepless nights and great evacuations by the skin, which it is apt to do; then it is necessary to moderate this extreme passion, as more dangerous than even grief, which excites the very opposite sensations. It is better where the mind is gradually prepared to meet, from any fortunate cause, the emotions of this passion, by which the effect will be lessened and regulated.

Laughter may be considered as a mode of expressing this passion; and, when kept within moderate bounds, is highly useful. "Laugh

and grow fat," though a vulgar proverb, is a proof of its utility, and of common belief on this point. It promotes the circulation of blood through the lungs; it is equally beneficial to the organs of digestion; and, in consequence, has proved the means of relieving pains of the stomach, cholic, and several chronic maladies connected with obstruction. The bursting of abscesses, in critical situations, has often happily been effected by this salutary effort.

¶ *Hope* is a modification of joy; or, properly, joy by anticipation. It is real joy without any alloy, which often happens when the actual event or good, which gives rise to it, comes. Hope, then, is the most pleasing state the mind can be in, and is highly favourable to health. "It tells always," in the language of the poet, "a flattering tale," and paints the image, not as it is, but as it ought to be. Its beneficial

influence on the body has been evinced in numberless instances, where it has produced a serenity of thought, and tended to prolong existence even in the most forlorn situations. It may be said to be that passion, or affection of the mind, which is the latest to leave us, and which continues to linger with us to the extinction of the vital spark on this side of the grave, and to point out, even before this event is completed, the scene that is expected beyond it. Hence it conveys, more than any other of our passions, an idea of

> The divinity that stirs within us,
> And points out immortality to man.

Hail, thou first best feeling of our nature! Mayest thou never, in this scene of vicissitude, forsake us!

Love is said to be the strongest of all the passions that can affect our nature; it is, at

least, less under the control of reason than any other; and it is fit it should be so, when we consider that this passion is intended as the principle on which the continuance of the species depends. This passion generally affects the mind by degrees; but it is, at the same time, when once rooted, more fixed than any other; and hence the caution that ought to be observed, in not giving way to it at an early period, when it is still under the restraint of the will. Hence the just advice of the Poet:—

With caution and reserve
Indulge the sweet destroyer of repose,
Nor court too much the Queen of charming cares;
For, while the cherish'd poison in your breast
Ferments and maddens, sick with jealousy,
Absence, distrust, or ev'n with anxious joy,
The wholesome appetites and pow'rs of life
Dissolve in languor: the coy stomach loathes
The genial board; your cheerful days are gone;
The gen'rous bloom that flush'd your cheeks is fled;

To sighs devoted and to tender pains
Pensive you sit, or solitary stray,
And waste your youth in musing; musing first
Toy'd into care your unsuspecting heart:
It found a liking there, a sportful fire,
And that fomented into serious love,
Which musing daily strengthens and improves
Through all the heights of fondness and romance;
And you're undone, the fatal shaft has sped,
If once you doubt whether you love or no:
The body wastes away, th' infected mind,
Dissolv'd in female tenderness, forgets
Each manly virtue, and grows dead to fame.

But while we thus caution against giving way to this passion in an ungovernable degree, it is not to be denied, at the same time, that the best effects are known to follow its reasonable indulgence. An attachment to a beloved object has been known to cure the most obstinate disorders, which resisted every other medicine, and it has produced a total change on the powers and disposition of the mind, often for the best purposes,

by giving it an ardour and heroism to vanquish every obstacle that may present itself to its desires.

It is where this passion is under a necessity of being concealed, and where there is no hope of enjoyment, as in many cases of the female sex, that it proves so detrimental to health, and preys with a secret uneasiness on the mind, such as is so beautifully described by Shakspeare, when he says—

> She never told her love,
> But let concealment, like a worm i' the bud,
> Feed on her damask cheek: she pin'd in thought,
> And, with a green and yellow melancholy,
> She sat like patience on a monument,
> Smiling at grief.

Sorrow is a passion the opposite of joy, and which, like it, admits of various degrees.

When long continued, it constitutes grief; when diversified by alternate agonising sensations between hope and despondence, it is named distraction; and when overwhelmed with disappointment, it is properly despair. This passion, in its general feeling and effect, may be styled the slow poison that corrodes the mind, and in the language of Scripture, "The worm that gnaws within." The body becomes gradually enfeebled by its suffering, the circulation rendered slower, allows accumulation and obstruction of some of the organs to take place. The stomach and bowels no longer perform their functions with activity. Actual disease then intervenes. The nervous system, under its powerful sensations, occasions a peevishness and irritability of temper, and, occupied solely with his own ungrateful feeling, the unhappy individual falls a prey to melancholy, and in time, in common language, dies of a broken heart.

Indolence and solitude are ever the supporters

and nourishers of grief. Occupation and society are, therefore, its chief remedies. In this point music will form a useful lenitive. According to the Poet,

There is a charm, a power that sways the breast,
Bids every passion revel or be still,
Inspires with rage, or all your care dissolves,
Can soothe distraction, and almost despair:
That power is Music.

Some indulgence in wine will be proper in such cases. The discharge of the skin should be promoted by friction and the warm bath, and a dry, warm, or temperate climate should be the situation chosen for a residence. Weeping is generally the termination of a violent paroxysm of grief, and should be considered as giving relief, and as a useful palliative remedy.

The next passion that claims the attention of

a Physician, and the most fatal of the whole, when carried to extravagant bounds, is *Anger*. It has accordingly been termed a short-lived madness, and is frequently fatal by inducing apoplexy. This effect of it is beautifully described by Armstrong, when he says,

But there 's a passion whose tempestuous sway
Tears up each virtue planted in the breast,
And shakes to ruins proud philosophy:
For pale and trembling Anger rushes in
With falt'ring speech, and eyes that wildly stare,
Fierce as the tyger, madder than the seas,
Desp'rate, and arm'd with more than human strength.
* * * * * * *
But he whom anger stings, drops, if he dies,
At once, and rushes apoplectic down,
Or a fierce fever hurries him to hell.

Anger, therefore, according to its degree, induces different spasmodic and convulsive symp-

toms, and these occasion various rooted affections in different parts of the body, though chiefly of a temporary nature. Irritability of disposition evidently disposes to this passion, and particularly the hysterical and hypochondriac temperaments as well as those of dry and rigid constitutions. In the former of these cases, when the passion is moderate, it is frequently beneficial, by increasing the circulation, where sluggish; but, in the latter constitution, its attack is always dangerous, and every act should be avoided that may tend to produce it. For such persons a mild diluent diet is most proper. All food that stimulates too much should be avoided, and indulgence in a large proportion of sleep should always be favoured. During the fit of anger it should be treated as an inflammatory disease, and the secretion of the bile is chiefly apt to suffer here.

Fear is a passion in its effects something

similar to grief, for it weakens the powers of body and mind in various degrees, according to the different stages of it. It has been known to produce lunacy, and in its highest fit of terror to prove even fatal, Bashfulness, Anxiety, and Terror, are all different modifications of it. It particularly favours the attack, and increases the malignity of epidemical diseases, and by producing a weakened circulation of the surface, gives rise to various cutaneous affections and other ills, as palsy, loss of speech, epilepsy, &c. The treatment under violent degrees of it should be the same as that suited to spasmodic maladies, by first removing the spasm produced, and then promoting the different evacuations that may be interrupted.

The lesser passions of *Envy*, *Jealousy*, *Disappointment*, *Fretting*, &c. may be all considered as modifications of the more important ones now detailed.

The general treatment of all mental disorders, may be comprised under the following heads:

1. To remove, as far as possible, the cause of the passion, whatever passion is predominant.

2. To inspire, according to circumstances, an opposite passion, as a means of cure.

3. To present the mind with a variety of scenes and objects of a different nature to that of our prevailing passion.

4. To affect the feelings by the power of music.

5. To attend to the state of the surface,

and

6. To observe a guarded regimen during the prevalence of any passion, in food, drink, and medicine.

NOTES

BY

THE EDITOR.

NOTES.

NON-NATURALS.] This term has been long (*vide* Chap. II. p. 14.) reprobated, although used by all professional men. It conveys no idea of what should be understood by it, and is a relic of the jargon of the Peripatetic School, or the Galenic Philosophy. Whenever adopted, it is necessary to give an explanation, as in the foregoing text.

DAMP AIR, p. 17.] "The humidity of the air weakens a man suddenly. It relaxes the solids, and, of course, weakens the circulation, so that the secretions are carried on with difficulty. The insensible perspiration becomes checked; the moisture passes in through the absorbing pores of the skin, and the patient feels a lassitude and heaviness, which deprive

him of all his gaiety, and render the mind as oppressed as the body.

"The air, in certain countries, is more humid than it seems to be. This humidity is so great in the Island of Java, and the neighbouring islands, and likewise on different parts of the Continent of India, that iron, steel, and even silver, are rusted, and injured by it, much more speedily than in the moistest season in Europe. Clothes become rotten, if kept long in chests in those countries, without being often exposed to the sun. Iron rusts on the Malabar coast ten times sooner than it does in Europe.

"The air is so humid in the West Indies, that in the island of Bermudas it rusts even the tiling of the houses, and stones, almost every sort of metal, and even the largest cannon, with incredible quickness. Neither hogs nor beasts of burthen ever drink in Jamaica, and yet they are continually sweating. The air is so moist, that the absorbing pores of these animals imbibe a sufficiency of water."

Cold Air, p. 18.] "The effects of the cold damp night-air in hot countries may properly claim a place here. The inhabitants of hot climates are exceedingly affected by a degree of cold, which would appear slight, perhaps, to an European. Patients of every class, and especially hypochondriacal ones, suffer much during the months of November and December, when this state of the air commonly prevails."

Bread, p. 65.] "Bread is a very general article of our food. There is not indeed much to be said on the subject of bad bread; I have observed, however, that it is often very hurtful to children, and that it gives them a pale countenance, and breeds worms. Shebbeare is of opinion, that the rickets are so common in France amongst the children, only because they eat bread, which, by its acidity, destroys the calcareous substance of the bones, and reduces them to a state of cartilage. This disease is not less common with us, but I ascribe it to a very different kind of acidity, of which I shall speak hereafter.

"The avarice of the London bakers has led them

to an invention which is extremely prejudicial to the health of the community, and this is the putting alum into the bread, in order to make it unnaturally white. These people having discovered that their bread generally occasioned costiveness, thought of obviating this complaint by mixing jalap with their flour, and this had indeed a purgative effect. Dr. Maningham has taken great pains to point out the different methods of sophisticating bread, together with the marks by which they may be ascertained, and the diseases that result from them."

VEGETABLES, p. 71.] "In general they seem to be more suitable to man, than flesh meat, and those men seem to have lived the longest, who have eat the least animal food. A vegetable diet seems to render us mild and humane, but is less calculated for a laborious and active life.

"We are therefore not to be surprised that Pythagoras should prefer vegetable to animal food; or that the Therapeutists, adopting similar sentiments, should content themselves with bread and salt,

adding at the most a little hyssop; and using only water for their drink. The earlier Greeks confined themselves to vegetable food, and are said to have decreed divine honours to Pelagus, who first taught them to eat acorns, which they considered as much more healthy than the other vegetables they had been accustomed to.

"The regimen of the Spartans is likewise well known in times much later than those we have just now mentioned; a regimen on which they prided themselves so much, that Pausanias, after the battle of Platea, directed two suppers to be provided, the one after the Lacedemonian, and the other after the Persian manner. 'Observe,' says he, 'the folly of our enemies, who, accustomed to live in this way, fancied themselves able to conquer us, who live in so different a manner.'"

FRUITS, p. 79.] "The flatulent nature of fruits is well known. Dr. Hales proved long ago, that an apple contains 480 times its bulk of air. Yet I consider baked apples as a light food, with which, and

bread and water, I should be able to live without any danger of flatulency or hypochondriacal affection, if such a kind of life was pleasing to me. The too free use of unripe fruit occasions cardialgia, colics, diarrhœa, and nervous disorders."

WATER, p. 93.] "Water would seem to be the drink intended by nature for man. Fermented liquors are due rather to the industry of mankind than to nature. There are certain determinate qualities which constitute good water. It should be light, soft, transparent, and perfectly insipid.

"The Greeks and Romans considered water as an universal medicine. Boerhaave tells us, that water cleanses and strengthens the primæ viæ, and that it keeps off acute diseases, and is the best remedy for thin persons, or those who have too much bile or any peculiar acrimony. Water does not extinguish the fire of genius. Demosthenes is said to have drunk only water. It would seem too as if Cæsar had confined himself to this liquor; Cato, speaking of him as the only one who had been able to over-

turn the republic by his sobriety. Tiraqueau drank only water, and yet he was the father of forty children, and published as many works."

QUALITY OF WATER, p. 94.] The advantages of a simple diluent element, such as water, for drink, cannot be sufficiently recommended. It is worthy of observation, that in Ireland the stone is a disease little known, and in the whole country the operation of cutting for it is seldomer practised than in one county of England. This must evidently be connected with the simplicity of the beverage in that country; and whether the water contains less mineral impregnation than in Britain, is certainly worthy of inquiry.

WINE, p. 96.] "Wine, when immoderately used, is to young people what manure is to vegetation, which hastens the progress of the fruit, but destroys the plant. Wine used in early life is a poison. It undermines all the principles of man, exhausts his powers, destroys the faculties of his mind, and

excites vomitings, fevers, phrenzy, madness, convulsions, apoplexy, and sometimes even death. It is the general effect of wine to enervate the slow system by degrees, if men habituate themselves to it in too great a quantity, and very often to terminate in dropsy; more commonly, however, it predisposes to inflammatory diseases, to gout, asthma, dropsy, and apoplexy.

"Sedentary persons of a plethoric habit, by drinking too much wine, bring on violent pains of the back and loins, and are disposed to generate calculus. Men have been seen to die from an inflammation of the stomach, by inconsiderately drinking too largely of wine after violent passion. Bacon tells us, he had seen the ancient opinions, relative to the effects of wine on generation, confirmed by experience. He is of opinion that great drinkers lose their virility."

The observation of Sir William Temple deserves to be here introduced, as a proper rule to regulate its use, and which ought to be recorded in letters of gold, and placed up in every banqueting-house:

" The first glass I drink is for my own health; the second, to my friends; the third, for good-humour; and I deny myself a fourth, unless to give pleasure to my enemies."

TEA, p. 105.] " Tea is adulterated by a variety of additional substances, but especially the bohea tea, which is often mixed with an infusion of Japan earth, and afterwards dried.

" People of the lower class, in China, boil the cheaper and inferior sort of tea in large quantities in a kettle for common drink. Persons of a higher rank, drink the finer kind of tea, prepared in the same manner as in Europe, but use no sugar with it. The Tartars are the only people in China who mix milk with it. The Japanese first powder the tea, and then, mixing it with water, stir it as we do chocolate, till it froths, and then drink it without sugar.

" The Asiatics in general, but above all the Chinese, extol the medicinal virtues of tea. I have seen some Chinese prescriptions for nervous weakness, head-ache, tenesmus, hæmorrhoids, cardialgia,

and a variety of other diseases, and of all of them tea was the principal ingredient. But it is well known how partial the Chinese are to every thing that originates in their own country; and enthusiasts always see things in a false light."

TEMPERANCE, p. 93.] The good effects of temperance have been often recorded, in the instance of the noble Venetian, Cornaro, who, from his infancy till he arrived at the age of forty, was subject to a puny and bad state of health, was then abandoned by his physicians, for a total decay of constitution, and, by a rigid adherence to a temperate diet and plan of regimen, afterwards established and enjoyed a flow of good health and spirits till he had reached more than a century. So nicely did he adhere to the mode he had laid down, that he was in the habits of taking only twelve ounces of solid food, and fourteen ounces of liquids, in the course of the day. He died at Padua, the 26th of April, 1566, sound in body, and with a mind vigorous and unimpaired. The importance also of temperance appears still

more evident, from the consideration of the prolongation of the life of those men who have been remarkable for it. The first, already mentioned, is Cornaro; the second, is Henry Jenkins, who lived to the age of 169, by observing the same plan; the third, is Thomas Parr, who reached to the age of 153; and in authors will be found numerous instances of the same advantages, arising from a rigid adherence to temperance.

But, at the same time, "too great a degree of abstinence will likewise tend to weaken and distress the faculties both of body and mind. Men who, in the earlier ages, from a mistaken notion of religion, confined their diet to a few figs or a crust of bread and a little water, were so many gloomy and visionary enthusiasts: and I have no doubt, but that the excessive abstinence to which the Carthusians and some other religious orders are subjected, is one of the great sources of modern superstition."

Exercise, p. 116.] Nothing is so essential to the health of man as exercise. The ancients,

although without the knowledge of the circulation of the blood, attended to it with a religious exactness. The Persian, Cyrus, so celebrated for his wisdom, and for every accomplishment that could adorn the prince and grace the man, caused to be enacted a law, that every Persian should regularly use daily exercise, before breakfast. Among the Greeks the youth were trained up in all kind of exercise: among the Romans, the *Campus Martius* was allotted to accustom the youth to bodily exercise.

This happy and invincible people, so long as they resisted the influence of luxury, lived (for 600 years) healthy and vigorous, without even requiring the aid of medicine; and the celebrated saying of Marcus Portius Cato, on this head, to his son, has been often noticed: "We are undone," says he, "if the Greeks once send us their physicians. They have contrived, by their art, to destroy all the foreign nations connected with them." It was by exercise alone, that Cæsar, with a weak and delicate constitution, became an invincible hero.

HORSEBACK, p. 122.] " Oribasius was indeed the first physician who expressly recommended riding on horseback for the sake of health; but it must be allowed that he took the hint from Galen, of whom it may justly be said, that as he learned a great deal from Hippocrates, so himself became a copious source of knowledge to succeeding physicians. It was the opinion of Plato, that ' exercise performed by one's own body, as walking, running, or playing at ball, was preferable to passive exercise in any vehicle, as riding in a chariot, or sailing.' Galen, having taken notice of these two sorts, says, (*De Sanit. tuend. lib. 2. cap.* 11.) that ' riding on horseback is a mixed kind of exercise, partaking of each ;' the horse performing the part of a vehicle, and the rider performing the active part of bodily exercise, by exerting himself in the management of his horse, and in keeping his seat. And, when we consider, that in those days they knew not the use of stirrups, we must allow such bodily exercise to have been then rougher than now. This, I think, was hint sufficient, to induce Oribasius,

who copied Galen, to recommend riding on horseback."

SNUFF, p. 152.] So strongly was the use of tobacco opposed at its first introduction into Europe, that it produced the anathemas of the Pope by a bull, professedly promulgated against its use; and, on the same subject, a treatise was also written by James I. severely reprobating it. The bull of the Pope occasioned a witty pasquinade upon it, the author applying to it the celebrated verse of Job, chap. xiii. ver. 25 :—

"*Wilt thou break a leaf driven to and fro? and wilt thou pursue the dry stubble?*"

THE END.

C. Spilsbury, Printer,
Angel-Court, Snowhill.