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THE

Paying

HISTORY of HEALTH

AND THE

ART of PRESERVING IT:

O R,

An Account of all that has been recommended by Physicians and Philosophers, towards the Preservation of Health, from the most remote Antiquity to this Time.

To which is subjoined,

A succinct Review of the principal Rules relating to this subject, together with the Reasons on which these Rules are founded.

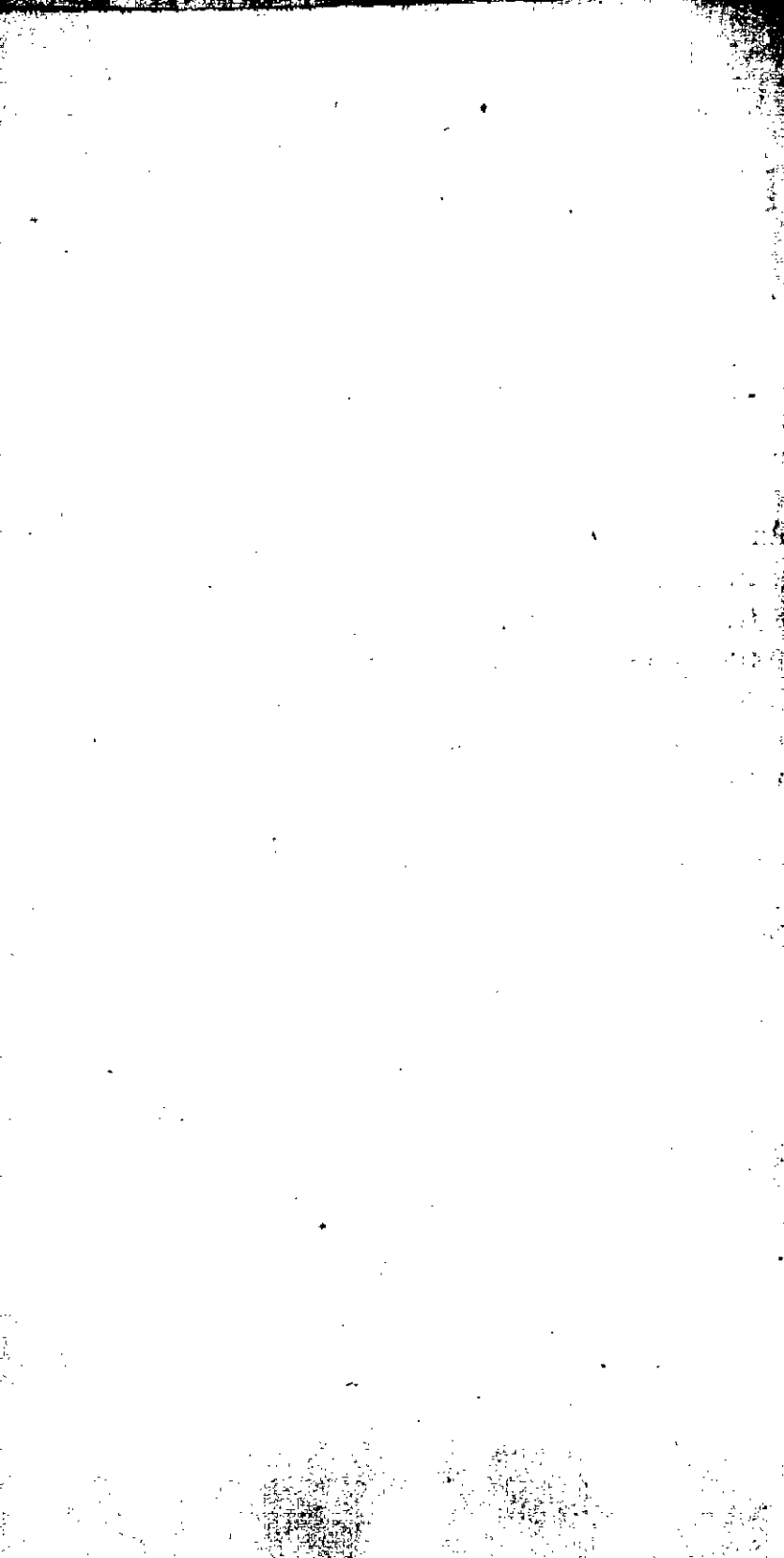
By JAMES MACKENZIE, M. D. Physician lately at Worcester, and Fellow of the Royal College of Physicians in Edinburgh.

*By surfeiting many have perished, but he that taketh heed
prolongeth his life. ECCLUS.*

D U B L I N :

Printed for G. and A. EWING in Dame-street.

MDCCLIX.



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THE
INTRODUCTION,

ADDRESSED TO THE

RIGHT REVEREND

ISAAC

Lord Bishop of WORCESTER.

MY LORD,

WHEN I found it expedient to retire from
business, your lordship was pleased af-
fectionately, to remind me, "That we
are all obliged to do good in every station and pe-
riod of life, and that a physician of long experi-
ence may contrive some method of being useful
even in retirement."

I was not surpris'd at any instance of humanity
from your lordship: I had long known your sym-
pathy with the distressed, and your zeal to relieve
them, having been the first to whom you thought
proper to communicate your noble design of estab-
lishing an infirmary at Worcester, which, in spite
of many discouragements, has flourished for several
years; and will, I hope, long flourish to the glory of
God, the relief of the helpless, and your own per-
petual honour. I knew also, that your lordship's ad-
vice to me was no unmeaning compliment, and did
not proceed from any partiality in my favour, be-
cause you made the same benevolent representation
to another physician who had lately declined prac-
tice.

B

PROMPTED

PROMPTED thus by your kind admonition, and animated by your example, I revolved in my mind which way I might be useful in my present situation. My age rendered me unable to pursue the painful practice of a country physician. I could not ride long journeys to remove distempers: I determined therefore to endeavour, in some measure to prevent them, by acquainting those that will restrain their appetites, and hearken to reason, with the most effectual rules to preserve health: For certain it is, that from men's ignorance or contempt of such rules, thousands never arrive at that period of life which their strength of constitution would have reached with proper care.

SHOULD I succeed in this endeavour, it was an unpleasing reflection to do some good beyond the grave. And should I not succeed, yet still my subject afforded me an agreeable amusement.

THAT I might add a greater weight and authority to these rules, I resolved to trace them to their sources, by giving the history of the whole of preserving health, from the most remote antiquity down to the present time. But so few and so scarce are the records we have of the first ages of the world, that it is no easy matter to collect facts from them, which have any relation to this subject.

SIX things are known to be necessary to the well-being of man, commonly called the SIX NON-NATURALS*, namely, *aliment, air, exercise and rest,*

* The very sound of the epithet NON-NATURAL, when applied to *aliment, air, sleep,* &c. so essential to the subsistence of man, is extremely shocking; nor is the long continuance of this ill-sounding appellation, which arose merely from the jargon of the Peripatetic schools, less surprising. The origin of it appears in a passage

and wakefulness, repletion and evacuation, together with the passions and affections of the mind; in the proper use and regulation of which the art of preserving health principally consists. Among these six, *aliment* is the only one of which mention is made before Pythagoras *, or (as some think) Herodicus †, who joined *exercise* with *aliment*, in order to preserve health. For this reason, no more should be expected from me, in looking over the first and obscure ages of the world, than to throw all the light I can collect upon that single article of the *Aliment of mankind*, until the gradual improvement of arts opens a more extensive scene.

The Samian philosopher made some small advances toward the conservation of health; Iccus and Herodicus proceeded a little farther; but it was the masterly hand of Hippocrates that (to use

where Galen divides things relating to the human body into three classes: Things which are NATURAL to it: Things which are NON-NATURAL; and things which are EXTRA-NATURAL. I shall subjoin his own words from the vulgar Latin version, *Class. vii. lib. de local. part. tertia, cap. 2.* "Qui sanitatem vult restituere decenter debet investigare septem res NATURALES, quæ sunt *elementa, complexiones, tumores, membra, virtutes, spiritus, et operationes.*—
 Et res NON-NATURALES, quæ sunt *sex, aer, cibum, potus, inanis, et repletio, motus et quies, somnus et vigilia, et accidentia animi.*—
 Et res EXTRA-NATURAM, quæ sunt tres, *morbus, causa morbi, et accidentia morbum comitantia.*" From this fantastical distinction

the epithet NON-NATURAL first arose, and has been retained in common use to this day, tho' it cannot be understood without a commentary, by which physicians seem to make an apology for the impropriety of it. Hoffman, for instance, and some others, when they apply the appellation NON-NATURAL to *air* and *aliment*, are obliged to subjoin the following explanation: "A veteribus hæc res NON-NATURALES appellantur, quoniam extra corporis essentiam constitute sunt." *Dissertatio 3. Decadis 2.*

* Pythagoras flourished about 530 years before Christ.

† Herodicus was cotemporary with Plato about 360 years before Christ. Vid. Helvici theatr. hist. p. 62 & 69.

Galen's expression) first opened the way † to the
and every other branch of the medical art, tho'
in most branches it has been greatly improved
since his time.

And here it may be asked, since all the learned
seem to agree, that Hippocrates was the father of
physic, Why should I not begin my history with
him? And to what purpose do I trouble the reader
and myself with impertinent conjectures about
what passed in the dark ages of the world? To
this, my lord, I answer, That as Hippocrates
flourished within 430 years of the Christian era,
it is not an unreasonable curiosity to enquire, if
anything was done with regard to the preservation
of health for upwards of 3500 years from the crea-
tion. The gradual advances made by the human
mind in cultivating the sciences, is a very ente-
raining subject, and the more interesting health
the more one is amazed that it should lie so long
neglected. And we shall find, in the course
of this history, that the first men were obliged
to alter and improve their diet, and that the preser-
vation of health was actually studied many ages
before Hippocrates, tho' the extreme difficulty
of attaining any considerable knowledge therein, re-
ndered its progress very slow, and the want of re-
cords †, to transmit what was truly valuable amo-

† Omnem ad medicationem viam aperuisse mihi videtur Hip-
ocrates, sed ita tamen ut ea curam diligentiamque ad absolutio-
nem desideret. Gal. de method. medend. lib. 9. cap. 8. Thoma Lin-
Anglo interprete.

* See the most learned dean Prideaux's connect. part 1. book
pag. 396.

† We are informed by Pliny, (lib. 7. cap. 56.) that Phere-
crates of Scyros first taught the Greeks the composition of discourses
in prose: And that Cadmus of Miletus was the first who taught the

the productions of the Greeks, has, in a great measure deprived us of the benefit of their experience. But farther, we learn from Hippocrates himself, whose authority is decisive in this point, that the medical art was actually cultivated to a great degree before his time †. And surely it was not foreign to my purpose to search whether or no the branch I treat of, had received any improvement.

But to return, tho' Hippocrates has given us excellent precepts on all the *six articles necessary to Life*, yet those precepts lie scattered throughout his works, with so little connection, that to render them universally useful, it was necessary to bring them under one regular view, which, so far as I know, was never attempted before.

Celsus and Plutarch are the only valuable writers we have on the subject of health in that long interval of time between Hippocrates, who was contemporary with the Persian Xerxes; and Galen, who lived under the reign of Marcus Aurelius Antoninus.

Galen (if we throw aside his Peripatetic rubbish) has written one of the fullest and best treatises

on the history of medicine; and yet both these authors flourished but about 1300 years before Hippocrates. How was it possible therefore, that any accurate account of what was done in physic by the Greeks before that time, should be transmitted to us? See Sir James Stewart's excellent defence of Sir Isaac Newton's chronology, p. 107.

I. At vero in medicina jam pridem omnia subsistant, in eaque principium et via inventa est, per quam præclara multa *longo tempore spatio sunt inventa*, et reliqua deinceps invenientur, si quis probe comparatus fuerit, ut ex inventorum cognitione, ad ipsorum investigationem feratur. De prin. medic. p. 8. lin. 42. versionis

tises* on the preservation of health that we have at this day; but it was expedient to contract his exuberance, and for preventing repetitions, to trench what he has copied from Hippocrates.

THE latter Greek physicians, the Arabians and indeed all who have treated on this subject from Galen to Sanctorius, have done little more than copy Galen, except a few whimsical Authors among whom, some have recommended a total abstinence from animal food; some a very spare diet, weighing temperance by the balance; some depended for health on panaceas, and some on the stars.

AMONG the more modern physicians, who wrote before the discovery of the circulation, Sanctorius deserves to be named with honour; who, by an amazing application, and a method little thought of before, has not only confirmed the observations of the ancients with regard to health, but has also added many valuable rules of his own. His method has been pursued by some physicians of different nations, that have, with great industry and judgment, accommodated many of his aphorisms to their respective climates.

Late writers on this subject, enlightened by the knowledge of the circulation, have rather illustrated and enforced the precepts laid down before than made any new or important discoveries; and yet some of them address the public with such an air of superiority, as if themselves had invented

* Galeni liber extat de tuenda sanitate, quem omnibus aliis hodie supersunt, perserimus. Cœringii introductio, cap. libel 7.

the rules which they only transcribe. Of this number is Frederic Hoffman, (in many respects a physician of great merit) who in a dissertation, which he calls *The seven rules of health* &c, after borrowing five of the seven from Hippocrates, and one from Galen, as your lordship will see at the bottom of the page, subjoins this curious rule of his own; *viz.* "Avoid physic and physicians, if you have any value for your health." These rules of health are undoubtedly good, and so much the more to be depended on in practice, as they are unanimously recommended both by the *ancients and moderns*; but still the knowledge which wa

I. Septem leges sanitatis. Hoffm. Dissert. 3. Decad. 2.

Lex prima. Odiæ nimium, quia naturæ est inimicum, effuge.

Hoffm. — *Omne nimium naturæ inimicum.* Hippoc. Aphor. 51. Sect. 11.

Secunda. Ne subito muta assueta, quia consuetudo est altera natura. Hoffm. — *A multo tempore consueta, etiamsi fuerint deteriora, subito minus turbare solent.* Hippoc. Aphor. 50. Sect. 11.

Tertia. Animo hilari ac tranquillo esto: quia hoc optimum tempus vitæ et sanitatis præsidium. Hoff. — *Lætis diffunditur per universum corpus calor, atque plus svas ejus motus fertur, unde majoris usus.* Gal. de caus. puls. lib. 4. cap. 3. versio. latin.

Quarta. Aërem purum et temperatum vehementer ama, quia ad corporis et animi vigorem multum confert. Hoff. — *Mortalibus aër, vitæ, tum morborum, causa est: morbi rari aliunde nascuntur quam ab aëre, cum is morbidis inquinamentis corpus subierit.* Hip. de Diet. pag. 296. edit. Fæsi.

Quinta. Quam maxime selige alimenta corpori nostro congrua, quæ facilius solvuntur et corpus transeunt. Hoff. — *Cibi ad sanitatem optimi sunt qui parce ingesti, semi et siti sufficiunt, et moderate per abent secedunt.* Hippoc. de affect. pag. 527.

Sexta. Mensuram semper quære inter alimenta et motum corporis. Hoff. — *Si inventa fuerit ciborum mensura et laborum ad usum quamque naturam ita ut excessus neque supra neque infra modum sit, inventa erit exacta hominibus sanitas.* Hip. de diet. lib. 1. pag. 341.

Septima. Fuge medicos et medicamenta, si vis esse salvus. Hoff.

learn from our predecessors, ought rather to excite gratitude than arrogance.

SOME writers of reputation upon the art of preserving health I could not find, tho' carefully searched for by my friends at London and in Holland, and by myself in the immense libraries of Oxford. Others again, who advance nothing new in matter or method, I have omitted; but shall gladly make mention of either when I come to meet with the former, or be convinced of an error or mistake with regard to the latter. Systematic writers in physic I seldom take notice of, as most of them touch but very slightly on my subject.

UPON the whole, I have endeavoured to distinguish and select such precepts as may be of some use at this time, from a large mixture of exploded customs and needless digressions, which are frequently met with in several ancients and moderns that wrote concerning health; and I have laboured to reduce those precepts to a proper method, with all the perspicuity and precision in my power, preserving the spirit and sense of my authors, rather than a close translation of their words. But, after all, repetitions are unavoidable, when various authors treat on the same subject, and succeeding writers have interwoven the sentiments of those who went before them with their own.

WHEN, in order of time, I mention an author that recommended any particular regimen of health, I join with him the principal writers who adopted his notions, tho' they were born many ages after him. Thus, for instance, I join doctor Cheyne with the philosopher Porphyry; and lord Verulam with the Greek physician Aetorius.

Lastly,

Happily, I have in the second part, for the ease of the reader, collected into a narrow compass those general and particular rules which are most conducive to health in the several periods and circumstances of life.

If it should be asked, why I address a medical treatise to your lordship? I answer, in the first place, that the preservation of health is an important branch of that *preventive wisdom*, which you so earnestly and constantly recommend. In the next place, it is a *philosophical* as well as a *medical* subject. Plutarch has composed an elegant dialogue upon it; Porphyry, Cornaro, Lord Venulam, Addison *, and other philosophical gentlemen, have recommended some parts of it. The clergy also have contributed their assistance; a pope † and a cardinal ‡ wrote concerning health, and we have few better treatises on temperance than Lessius's Hygiasticon. Besides, all men are concerned to take care of their health. It is useful towards the discharge of our duty, and without it every other enjoyment is insipid. When the body is in pain, says Democritus, the mind has no room for the exercise of virtue; but *health enlarges the soul* §. In short, since health is apt to be impaired by the labours of the mind, it is principally for such as your Lordship I write; for those, who think themselves in duty obliged to preserve their health for the good of the public, and recommend to others a due regard to that invaluable blessing.

* See Spect. No. 115 and 195.

† John XXI. formerly Petrus Hispanus.

‡ Vitalis de Furno.

§ Αὔραται δὲ νόος παρὲς τὸν ὕμνον. Epist. ad Hippoc.

THE
HISTORY
OF
HEALTH, &c.

PART I.

CHAP. I.

Of man's food before the fall.—Moses the best historian of remote antiquity.—Probable use of the tree of life.—Early advances toward the improvement of man's diet by husbandry.—Whey lost in some countries.—Longevity of the first generations infers the goodness of their aliment.

GOD was pleased to create man in such a manner that he could not subsist without a daily supply of aliment; and all the ancient writers of every denomination, who touch on this subject, agree that fruits, seeds, and herbs, just as they grew *, and presented themselves to the hand, were the food of the first men.

BUT

* “ And God said, behold I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat.” Gen. i. 29.

BUT when we come to inquire into the nature of this sort of food, we find that, tho' it is very proper for cattle, whose organs are adapted to such aliment, it could not be quite agreeable to man, who was made of a more delicate frame. The most delicious* fruits are cold, and afford but little nourishment. Seeds, without a previous dressing, are flatulent and hard to digest; and herbs still more harsh and crude. Nor is this a controverted point, but the settled opinion of physicians in all ages and climates, Greeks *, Arabians †, Germans ‡.

We are not from hence to infer, that man, at his first production, was treated worse than the beasts of the field; such partiality was inconsistent with the attributes of the deity, ever perfect in wisdom and goodness, tho' we cannot always comprehend the reason of his dispensations. We should rather conclude, as man was endowed with nobler faculties, that he was also distinguished with higher marks of favour; and that the pleasures, even of the animal life, were bestowed in greater profusion upon him, while he preserved that innocence of which he must necessarily have been possessed, when he came out of the hands of his creator.

MOSES is the only historian § who gives an account

I am of opinion, says Hippocrates, that in the beginning man made use of the *same food* with the beasts. Lib. de pric. medic.

Volivago vitam tractabant more ferarum. Lucet. lib. 5.

And as to the first pair before the fall, one may venture to say, that the drudgery of providing utensils, and dressing victuals was not very suitable to a life of paradisiacal happiness.

* Hippocrates, Galen. † Avicenna. ‡ Melchior Sebizius.

§ The heathen historians having themselves no knowledge of the true God, represent man (without alledging any cause for such usage)

count of this transaction worthy of the supreme Being, which, in my humble opinion, is an argument of the truth of his history, and of the preference it deserves.

HE allots indeed to Adam, before the fall, the same sort of aliment * which other historians do to the first men; but then he informs us, that the

usage) as in a most wretched condition, sprung up by *chance*, by *fate*, or by *nature*, (words which convey no distinct idea) destitute of all aid or resource, except from his own sagacity, which, according to them, must have been very pitiful, since it had not, in many ages, found out the necessary use of the plough, or the sheepfold.

Sanchoiatho, in the fragment we have of him, (Euseb. præp. Evang. lib. 1. cap. 12.) says, that "the first men consecrated the plants shooting out of the ground, and judged them gods, and worshipped those deities upon whom they themselves lived."

Diodorus Siculus, from the Egyptian records (Bibl. histor. pag. 11. edit. Westlingii) tells a lamentable tale concerning the first race of men. "who perished in great numbers thro' want of knowledge "in providing themselves food, cloaths, or houses against winter."

Pliny also, enumerating the calamities of this proud and helpless lord of the earth, peevishly remarks, that "it is hard to determine "whether nature deserves to be called a kind parent, or a cruel "step-mother," lib. 7. hist. nat. in præm. The truth of it is, Moses had a much better opportunity of knowing the transactions of the first ages than any pagan historian could possibly have, being himself a descendent from Abraham, between whom and Adam there intervened but two persons, Methusalem and Sem, through whose hands an account of facts, in which themselves were concerned, might be very faithfully transmitted. And indeed, where very long-lived families mingle so little with strangers, as the ancestors and posterity of Abraham did, family traditions, especially of important facts, are not easily lost. "On ne compte "que deux tetes (says Berruyer) entre Adam le premier des "hommes et Abraham appellé de Dieu a fonder un peuple "nouveau; sçavoir Methusalem, mort l'année même du deluge, "et Sem, mort vingt cinq ans seulement avant Abraham. En "sorte qu' Abraham a dû apprendre l' histoire du monde devant "et apres le deluge, de Sem avec qui il a vécu cent cinquante ans; "Sem de Methusalem avec qui il a vécu quatre vingt dix-huit "ans; et Methusalem d' Adam lui même avec qui il a vécu deux "cens quarante trois ans." Hist. du peuple de Dieu. livr. 1.

* Gen. i. 29.

tree of life grew in the midst of the garden †, of which man might freely eat ‡, until he, forfeiting his right to immortality, was driven out of paradise; and the reason of his expulsion assigned, “lest now he put forth his hand, and take also of the tree of life, and live for ever §.”

Now, a tree intended to secure immortality to man, would likewise secure perpetual health, as the means leading to that end; and would consequently prevent, or immediately remove, every inconveniency which might arise from the insalubrity of his common diet. Does it not seem absurd to imagine, that neither Adam nor Eve ever tasted this fruit, tho’ they had an unlimited permission to partake of so great a blessing? If prudence or curiosity did not prompt them, would not the natural effects of their ordinary food oblige them to make so necessary an experiment? Besides, it is evident from the nature and mechanism of the human body, that man was originally created mortal, and that there was no possibility (while he continued the same creature) of making him immortal in this world, but by means of the tree of life, or some such panacea, contrived by infinite wisdom, and miraculously interposed, to prevent sickness, old age, and death.

To have an universal remedy always at hand,

† Gen. ii. 9. ‡ ib. ii. 16, § ib. iii. 22.

* “Corpus bene sanum, (says Boerhaave) per actiones & vitam sana inseparabiliter sensim ita mutatur, ut tandem mors senilis accidat inevitabilis.” *Instit. med. sect. 1053.*—And some of our great divines are of the same opinion. See Clark’s sermons, vol. 8. serm. 14. where the doctor says, that “Adam was not (as some have, without any ground from scripture, imagined) created *actually immortal*, but by the use of the *tree of life* (whatever is implied under that expression) he was to have been preserved from dying.”

which

which could not only remove every inconveniency that the natural qualities of their common food, or any excess, or other mistake, might bring upon them, but also in a moment renew their strength and youth, which otherwise, by the very structure of the animal machine, must perpetually tend to decay. To enjoy such a privilege, I say, insured their living for ever, and to be excluded from it, consigned them over to death, or, in other words permitted nature to take her course: And those who consider the pernicious effects which the fruit * and leaves of some trees have upon animal life, will, from a parity of reason, easily imagine the renovation of health that might be instantly received from a tree or fruit of contrary qualities. Give me leave to add, that as St. John speaking of the tree of life, alludes to its use of healing, this allusion seems to strengthen the former opinion, and to shew what its original destination was. “ On
 “ either side of the river was the tree of life,
 “ which bare twelve manner of fruits, and yield-
 “ ed her fruit every month; and the leaves of the
 “ tree were for the † healing of the nations.”

SEVERAL learned and worthy men are, indeed, of opinion, that the food appointed for Adam, in his state of innocence, was not only delicious, but in every respect perfectly agreeable to the human constitution; and support their opinion by what Moses says, that “ out of the ground made the
 “ Lord God to grow every tree that was pleasant

* A simple water distilled from the leaves of the lauro-cerasus, from the kernel of the black cherry, or from the bitter almond, given to a dog, kills him in a moment. “ Quam multa fieri non
 “ posse, priusquam sunt facta, judicantur.” Plin. lib. 7. cap. 1.

† Rev. xxii. 2.

“ to the sight, and good for food.*” That God made to grow every tree which was *good for food*, does not contradict any thing I have advanced, for several kinds of fruit were then, and always will be *good for food* with a proper preparation. For my part, I am as far from depreciating the paradisiacal happiness as any person, but cannot see why the extraordinary virtues communicated to the tree of life, and the permission to mingle it with every other sort of food which might have any inconvenient quality, should not as clearly demonstrate the beneficence of the Deity, and the felicity of man, as an appointment of various sorts of food in themselves delicious and wholesome. And perhaps the perpetual access which man had to this supernatural gift, might be a proper means to remind him of his constant dependence on the hand by which it was bestowed. Nor does the curse denounced against the earth, seem to imply an essential change in the nature and quality of its productions, but only that the ground was less fertile, and required more culture than before; for some culture was necessary, even in the *happy garden of Eden*, into which the man was put *to dress it*†. The great difference seems to have been, that what was a pleasing amusement before the fall, became a painful toil after that fatal period.

THUS far I have ventured to touch upon the nature of man’s aliment before the fall, being obliged, according to my plan, to inquire into his manner of subsistence from the beginning; but since Moses, my only guide in this narrative, has been so short upon it, I shall pursue it no farther.

* Gen. ii. 29. † Gen. ii. 15.

AFTER man became ungrateful, and rebelled against his maker, it was but a gentle and necessary punishment * to remove him from those pleasures of which he had made a bad use; and to leave him amidst the spontaneous productions of the earth in a fruitful soil, to provide his food by his own industry, and dress it by his own sagacity, and growing experience. He might also, and no doubt did, receive especial † instruction from God concerning things above his own capacity, which were necessary to his subsistence, since it is evident, from the history of Cain and Abel, that all immediate intercourse between God and man was not ceased; but it is probable, that for the most part, he was left to draw these helps from reason, which the brutes did from instinct. Guided accordingly by his reflection and good sense, Adam in a few years reaped the fruit of his industry, and lived on the produce of his flocks and fields; for we find his sons instructed both in pasturage and agriculture: “Abel was a keeper of
* sheep, but Cain was a tiller of the ground †.”

AND here we may observe, that mere necessity

* Punishment seems to be the only effectual means of reclaiming perverse minds, as well as the best expedient to deter the innocent from pursuing bad courses; for it is not to be imagined, that the deity would punish any creature, from indignation or revenge, as men frequently do.

† The greatest men of antiquity thought that the interposition of the Deity was necessary to the invention of arts; I shall at present only cite Pliny, who says, “*Quod si quis illa forte ab homine excogitari potuisse credit, ingratis deorum munera intelligit.—Quod certe casu repertum sit, quis dubitet?—Hic ergo casus, hic est ille qui plurima in vita invenit Deus.*” Lib. 25. esp. 2, 3.

‡ Gen. iv. 2.

invented the first rudiments of the art of preserving health, since Adam was obliged, after he lost his panacea, to contrive some method of dressing the fruits of the earth, in such a manner as to make them agree better with him, than they had done quite crude and unprepared.

To this opinion it has been objected, that bread is expressly named by God himself upon the fall: "In the sweat of thy face thou shalt eat bread †." But it may be answered, That the word *bread*, mentioned there, cannot mean bread, in contradistinction to a more crude aliment, because, "Thou shalt eat the herb of the field," goes immediately before it, but must be intended to mean food or sustenance in general, as we have it in the lord's prayer, and many other ‡ passages of scripture.

How some nations came totally to lose the knowledge of husbandry, and live for many ages, in a savage manner, on acorns and other wild fruits and plants, it is not easy to clear up, unless we suppose (which seems to be the truth of the matter) that husbandry was at all times cultivated in the fertile and champaign provinces of Assyria and Egypt; but that the people who first transported themselves into Greece (perhaps to avoid oppression or punishment) being destitute of every aid and implement of husbandry, were obliged to live on the spontaneous produce of the woods and fields so long, that their posterity might forget to have

† Gen. iii. 19.

‡ As in Gen. xxviii. 20.—xxix. 6.—xliii. 32. Exod. ii. 20. Prov. xii. 19.—xxii. 27. Lam. v. 9.

heard of any such art as husbandry in the world; and might consequently themselves imagine, and persuade others, who were not acquainted with the Jewish history, that the first generations of mankind, every where, had lived after the manner of their own rude and ignorant ancestors. And as we have almost all our ancient histories from the Greeks, it was natural that their notions should prevail before the writings of Moses were published*.

INFLUENCED by this national prejudice, Hippocrates gives it as his opinion, that “in † the beginning man made use of the same food with the beasts, and that it was the many distempers brought upon him by such indigestible aliment, which taught him, in length of time, to find out a different diet, better adapted to his constitution;” and he was probably in the right with respect to his own country. But with respect to mankind in general, that, from their first production, they lived miserably, and in a wretched ignorance of the common conveniencies of life, Hippocrates, who was so great a lover of truth, would doubtless have entertained a different opinion of them, had he been acquainted with the rational and consistent history of Moses.

It is amazing that the Greek and Latin writers, who admit the longevity of the primeval generations, should, at the same time, appoint no better

* They were not translated into Greek, and consequently could not be known to the world before the time of Ptolemy Soter, about 300 years before Christ. See Prideaux's connections, part 2. book 1. page 45.

† De prisc. medic. page 9: edit. Fœsli.

food for them than that of the beasts, viz. the spontaneous and crude productions of the earth; which, according to Hippocrates, and, indeed, according to common sense, must rather have shortened, than lengthened their lives.

THAT the tradition of this longevity has run through all antiquity without controul, we learn from Josephus, who had the good fortune to see many works intire, of which we have now but a few scattered fragments. He affirms, that all the writers of antiquities, as well Greeks as Barbarians, admit the longevity of the first ages, and subjoins these words: “ * Manetho who wrote the Egyptian history, Berosus who wrote the Chaldean, Mochus, Hestæus, and Jerom the Egyptian, who wrote the Phoenician antiquities, give their concurrent testimony to this truth. Hesiod also, Hecatæus, Hellanicus, Accusilaus, Ephorus and Nicolaus, relate, that among the first race of men, some lived to a thousand years.”

LUCRETIVS also, (that we may cite one testimony out of many among the Latin poets) assents to the longevity of the first men, and says that they were hardy, “ because the hard earth produced them.”

————— *tellus quod dura creasset:*

————— *validis aptum per viscera nervis;*

Nec facile ex æstu, nec frigore quod caperetur:

Nec novitate cibi nec labi corporis ulli.

Multaque per caelum solis valentia læstra

Volgivago vitam trahebant more ferarum.

The nerves that joined their limbs were firm and strong,

Their life was healthy, and their age was long.

* Antiq. Jud. lib. 1. cap. 3.

Returning years still saw them in their prime,
They wearied e'en the wings of meas'ring time.

CREECH.

NOTHING can be more obvious than that the avowed longevity of the primeval race necessarily infers the salubrity of their food. And in fact, we find that bread, milk, and the fruits of the earth, dressed in a plain and simple manner, together with water to drink, were the aliment of Adam's family; which sort of aliment, to healthy persons, accustomed to it from their infancy, is perhaps as wholesome as any we have at this day; and by the experience of all ages of the world, found proper to prolong life*: And there is no reason to doubt that Adam's posterity was well acquainted with this diet before their migrations into transmarine countries; and it was, perhaps, to the salubrity of this simple diet, as well as to the strength of their stamina, and the temperature of the seasons, that, in a great measure, they owed their extraordinary longevity. It is also insisted upon by some learned men, that the antediluvians were no strangers to animal food and fermented liquors, which opinion shall, in its proper place, be discussed.

* This is evident from the long lives of the first Hermites, who subsisted on bread and water with a few fruits and sallads, plainly dressed. See also Gemelli's account of the late Aurenzebe, who, from his usurpation of the throne, never tasted flesh, fish, nor strong liquors, and lived in good health to near a hundred years.

C H A P. II.

Food of the first inhabitants of Greece.—The golden age.—Wherein consisted the felicity of it.—Arcadians the most noted shepherds.—Aliment of the Greeks improved by husbandry.—Benefit of the arts.—Bread and milk, the first mild and wholesome food found out by man, as well in Europe as in Asia.

WHEN Adam lost his innocence, he lost also the benefit of the tree of life, but the same common food was continued after his transgression which he made use of before it, “and thou shalt eat the herb of the field*.” Happily, however, by his own sagacity, under the kind direction of providence, he and his family soon became acquainted with husbandry, which supplied them with the necessaries of life, in a plain and comfortable manner.

It was not so with the first inhabitants of Greece, who having left the fertile countries of Asia, and being destitute of the implements and supports of husbandry, lived, like the beasts, on the spontaneous productions of the woods and fields. This account we have from their own historians, of whom it will be necessary to remark, that they speak of their earliest Grecian ancestors, as if they had been the first generations of mankind.

DIODORUS SICULUS † writes, that “the first men ranged over the fields and woods in search

* Gen. iii. 18. † Bibl. hist. lib. 1. Sect. 8.

“ of food like the beasts, eating every mild herb
 “ they could find, and such fruits as the trees
 “ produced of their own accord.”

ÆLIAN * affirms, that “ the diet of the prime-
 “ val race differed according to the different pro-
 “ ducts of their respective countries: The Arca-
 “ dians having lived on acorns, the Argives on
 “ pears, the Athenians on figs, &c.” Plutarch †
 relates, that “ the first Argives, led by Inachus,
 “ searched the woods for wild pears to support
 “ them.” ‡ Among the Roman writers also,
 Pliny laments the savage condition of the first
 ages, “ which subsisted on acorns.”

AND Galen seems to think all these accounts
 true; for he assures us §, “ that acorns afford as
 “ good nourishment as many sorts of grain; that
 “ in ancient times men lived on acorns only; and
 “ that the Arcadians continued to eat them, long
 “ after the rest of Greece had made use of bread-
 “ corn.”

This account Galen probably learned from He-
 rodotus ||, who relates, that “ upon the death of
 “ Lycurgus, the Lacedemonians, meditating the
 “ conquest of Arcadia, were told by the oracle,

* Var. hist. lib. 3. cap. 39.

† Ἀργάσι δάτραφῆται λέγουσι.

The same author, in his life of Artaxerxes Longimanus, tells us
 that much later than the time we speak of, this unwary prince led
 a great army against the Cadusians, a robust and warlike people,
 whose inhospitable country produced neither corn nor good fruit, so
 that the natives were forced to live on pears and apples, which grew
 wild and spontaneous.

‡ Hist. nat. lib. 16. in princip.

§ Gal. de aliment. facult. lib. 2. cap. 38. And he means the
 acorns of the beech as well as those of the oak.

|| Clio, cap. 66.

“ that there were many brave * acorn-eaters
 “ (Βαλκωνηφάγοι ἄνδρες) in that country, who would
 “ repel them in case they attempted to carry their
 “ arms thither, as it afterwards happened.”

THE poets are of the same opinion with the historians, concerning the food of the first inhabitants of the earth: Hesiod sings †,

— κερκὸν δ' ἴφρες ζείδωρος ἄρουρα
 Ἄυτιμάτη πολλὰν.

The fields, as yet untill'd, their fruits afford,
 And fill a sumptuous and unenvied board. COSSKI.

And Ovid, (for it would be tedious to cite all the poets) to the same purpose says, in the first book of his metamorphosis:

Contentique cibus nullo cogente creatis,
 Arbuteos fetus, montanque fraga legebant,
 Cornaque et in duris hærentia mora rubetis,
 Et quæ deciderant patula Jovis arbore glandes.

Content with food which nature freely bred,
 On wildings, and on straw-berries they fed;
 Cornels and bramble-berries gave the rest,
 And falling acorns furnished out a feast. DRYDEN.

THOSE ages nevertheless, are by some philosophers and poets called the *golden ages* of the world :

* It should seem that the Arcadians might continue in their primitive state longer than their neighbours, merely because they were shepherds; for property of lands did not begin so early among them, as among those addicted to agriculture. This appears from what is said in Genesis xiii. 9. concerning the people of Palestine, who allowed Abraham and Lot to feed their cattle on the neighbouring grounds; whereas the Egyptians had their lands in full property, until Joseph bought them for Pharaoh; Gen. xlvii. 20.

† Oper. et dier. lib. 1. lin. 117.

But

But this notion must have arisen, either from some obscure tradition they had concerning paradise, or from the supposed integrity of men's lives, while they subsisted in common on what the woods and fields supplied, and while there was yet no property or private interest to raise disputes and animosities, and tempt them to violence or fraud; for such a *splendid appellation* could not, with any propriety, be given with respect to the comforts and conveniencies of life, which have been enjoyed in a much higher degree by succeeding ages, instructed in the knowledge of arts and sciences.

AFTER this celebrated æra, in which, whatever peace the mind might enjoy, the body was but indifferently provided for, and man could just preserve his existence from day to day: the first approach towards a more mild and wholesome diet among the Greeks, and towards a fund of plenty for all seasons of the year, was made by tilling the ground and sowing corn.

HESIOD * ascribes this invention to Ceres, by his admonishing the husbandman to pray to Jupiter and to *her*, before he enters upon his labour, in the season of tillage:

Ἐυχισθαί δὲ Διὶ χθονίῳ Δημήτρει θ' ἀγῆν.

Pray to terrestrial Jove, and Ceres chaste.

The Roman Poets do her the same honour more expressly:

*Prima Ceres unco glebam dimovit aratro,
Prima dedit fruges, alimenta que initia terris.* OVID.

* Oper. et dier. lib. 2. lin. 83.

PLINY attributes not only the invention of the plough, but of grinding corn also, and making bread to Ceres; and adds, that "divine honours" were paid her in Attica, Italy, and Sicily on "this account *." And indeed, if she had any share in such a noble and useful invention, she deserved all the reasonable encomiums which they could bestow.

WHEN we consider that the most polite nations on earth have formerly lived as the most savage and barbarous do at this time, we have reason to extol the discernment and industry of our ancestors, in cultivating the arts and sciences. It would be endless to enumerate the advantages we derive from them. How many conveniencies and pleasures of life have their sagacity and address put us in possession of! How much labour, inquietude, and misery have they delivered us from! And perhaps the munificent author of nature has himself, in a great measure, directed their researches both for use and ornament. Does not Moses seem to favour this opinion, when, describing the work of the tabernacle, he tells us that GOD said, "And in the hearts of all that are wise hearted I have put wisdom †?" And so grateful were the ancient inhabitants of Italy to their benefactors, that they conferred immortal honours ‡ even on Ster-

* Ceres frumenta invenit, cum ante glande vescerentur; eadem molere et conficere in Attica, Italia, et Sicilia; ob id dea judicata. Hist. nat. lib. 7. cap. 25.

† Exod. iii. 1, 2, 3, 4, 5, 6.

‡ Italia suo regi Stercutio, Fauni filio, ob fimi inventum immortalitatem tribuit. Plin. lib. 17. cap. 9. See Rollin's introduction to his history of arts and sciences.

cutius the son of Faunus, for his invention of improving land, by spreading dung over it.

AND have not we reason to admire the genius and generosity of Hippocrates, who has so greatly improved and communicated to mankind, an useful science, which seemed in his days, to be wholly confined to himself and his family? And should we not be thankful to providence, when we see the art of healing brought so near to perfection in our time, and daily receive so great benefit from it?

As to the other great branch of husbandry, or the management and use of flocks and herds, it is probable that this was recovered in Greece, about the same time with agriculture, and that the Arcadian shepherds might teach their skill in pasturage to the other provinces, and from them, in return, learn agriculture.

FROM what has been said, it appears probable, that as bread, milk, and various simple preparations of mild fruits and herbs, were the first kindly and healthful food found out by Adam and his family, and used by his posterity in Asia, until they became acquainted with animal food; so likewise the same seems to have been the first wholesome aliment, revived by the Greeks, after it had been lost by their ancestors.

C H A P. III.

First permission to eat flesh.—This opinion controverted.—Invention of wine and beer.—The various sorts of aliment used from the creation down to Moses.

THE next step to improve man's aliment, was the permission given him to eat flesh, upon account perhaps, of the scarcity and bad condition of the fruits of the earth, after it had undergone so great a change, by being so long and so deeply covered with the waters of the deluge. "Every moving thing that liveth shall be meat for you; even as the green herb have I given you all things *." This opinion, however, has been strenuously controverted. Some learned men assert, that Adam was permitted to eat the flesh of animals, or, at least, that his posterity did eat it, with or without permission, long before the flood. Others on the contrary, maintain that Noah was the first who had a permission to eat, or did eat any animal food.

THE former, in support of their opinion, assert that the *dominion* † given to Adam over the brute creation, implies a permission to kill animals for food; and that the *Skins* ‡, of which God made coats for the first pair, shew that a proper use was made of such a permission: That no good reason can be assigned, why the Almighty should give a more unlimited authority over the brutes after the deluge, than before it; and since animal food af-

* Gen. i. 28.

† Gen. i. 28.

‡ Gen. iii. 21.

fords a more strengthening nourishment than the vegetable kind, we ought to conclude, that it was allowed from the beginning: That the clean beasts being taken in by sevens, and the unclean only by two, the male and his female, it may be presumed, that the surplus of the clean was intended for provision to Noah's family, during their abode in the ark: That the appetites of the antediluvians must have been pampered with flesh meat, and their passions inflamed with strong liquors, to incite them to commit such great wickedness as provoked the Creator to destroy the whole species, except one family; since bread, milk and water could never stimulate them to that excess of violence: And this argument is farther confirmed by observing that carnivorous animals, as lions and tigers, are more fierce than those which live on herbage. And lastly, that as the sacrificing of animals (which was a most early institution) might have given occasion first to the tasting, and afterwards to the eating of dressed flesh, which (to a hungry stomach especially) sends forth no unfavoury odour, we can easily account for the commencement of this food. And as most of the antediluvians were under no restraint of conscience, to prevent their using that kind of food, supposing it had not been expressly permitted, there is little reason to doubt that flesh became a part of common aliment long before the deluge.

THOSE on the opposite side deny, that the *dominion* given to Adam over the brutes implies a power to kill them; it is cruel, say they, to infer such a power from an ambiguous expression.

Isaac

Haac gave Jacob *dominion* * over his brethren. The Philistines had *dominion* † over Israel, which did not imply a right to destroy them. Man's *dominion* over the brutes seems to have consisted in the use which he might make of their milk, wool, honey, feathers, &c. and of their assistance and service for carriage, agriculture, and defence. It does not follow, because animal food affords a more strengthening nourishment, that therefore it must have been allowed from the beginning; for we find, say they, that tho' blood ‡ is as nourishing as flesh, yet it is prohibited; not only to Noah § and the Jews ¶, but also to the stranger **, under pain of death; and since blood is prohibited in every place where flesh is permitted, it follows, that the prohibition and permission must have been promulged at the same time, *i. e.* after the flood.

As to the argument, That the sons of violence, before the deluge, must have been stimulated by high food and strong drink, to perpetrate so much wickedness; the opposite side maintains, that mens morals are corrupted rather through want of discipline, than by the nature of their food; and that men of healthy and robust constitutions, (as the antediluvians most certainly were) under no restraint from laws human or divine, are the most violent and mischievous savages of nature, let their aliment be what it will: That, in fact, the nations of the earth most addicted to lewdness, rapine, and

* Gen. xvii. 40. † Judg. xiv. 4.

‡ Gallinarum ac columbarum sanguine nonnulli vescuntur, maxime altitum, qui suum sanguine haudquaquam est inferior, neque voluptate, neque coctionis facultate. Gal. class. 2. De aliment. facult. lib. 3. cap. 23. Homerus quoque caprarum sanguinem in cibo jucundum esse non ignoravit. Ibid. cap. 18.

§ Gen. ix. 3, 4. ¶ Lev. xvii. 10. &c. ** Deut. xii. 23, 24.

murder at this day, are frugal in their diet, and forbid wine by their religion, particularly the pirates of Barbary, and the wild Arabs. And even in Britain and Ireland, that those who live on bread, milk, cheese, cabbage, and potatoes, are, perhaps, no less disposed to rapine and violence than such of the community as have good drink and flesh-meat in abundance. Nor is a wild bull that eats grass, less furious than a lion that feeds on flesh. And we daily see some birds, that live on grain, fight and tear each other with amazing animosity.

THEY urge farther, that as we have no genuine account of the primeval state of man from any historian but Moses, and since he informs us that vegetable food was expressly appointed for man before the flood * in two different periods, and animal food immediately after it †, we have no authority to assert the contrary, unless we can shew that we know the transactions of those times better than the Jewish historian: And why should a direct explicate permission to eat animal food after the deluge, as he had done *the green herb before it*, be given to Noah, if the same permission had been given to Adam?

BESIDES, the most eminent historians ‡, physicians §, and philosophers ¶ of antiquity agree, that the first generations of men did not eat flesh.

* Gen. i. 29. and Gen. iii. 18. † Gen. ix. 3.

‡ Moses, Sanchoniatho, Diodorus Siculus.

§ Hippocrates, Galen.

¶ Pythagoras, Empedocles, Plato lib. 6. de republica. Porphyrius de abstinentia ab usu animalium. Plutarch de usu carnis. See also Diogenes Laërtius de vita philosophorum.

“ Enimvero, (says Pliny) rerum omnium parens nullum animal ad hoc tantum ut pasceretur, aut alia satizaret, nasci voluit. Nat. hist. lib. 21. cap. 13.

LASTLY,

LASTLY, in reference to the first who ventured to destroy animals for food, they affirm, that the attempt to tear and devour creatures so like himself, was the most savage and unnatural thought which ever entered into the heart of man, and that nothing less than an express permission from the Deity, could either induce or justify the first who made the cruel experiment, to take such a bold step, let his appetite be never so keen, or the odour of burnt offerings never so fragrant.

ANOTHER great improvement of man's aliment was the invention of wine, which well deserves the encomium bestowed upon it by Plutarch *, of being "the most noble of all liquors, the most palatable medicine, and of all delicacies the most grateful to the stomach †. Noah began to be a husbandman, and he planted a vineyard, and he drank of the wine and was drunken §." This good man being a stranger to the qualities of his new liquor, reason and humanity required that he should try what effect it might have upon himself, before he would recommend it to his family; but had the misfortune to be, for a while, deprived of his reason by the trial, like a thousand other curious enquirers into nature, who have ge-

* Præcept. de sanit. tuend.

† Aretæus also, a physician of the first rank among the ancients, commends wine no less for the cures which it performs. I shall cite his own words from the elegant Latin version of the learned Dr. Wiggan. De morb. acut. curat. lib. I. cap. 1. "Sed quum metus sit, ne in vaporem humiditatemque homo dissolvatur, unicum subsidium vinum est; celesiter enim substantiam alendo instaurat: et quoquo versus ad extremitates usque permeat, robori apponit robur, et spiritum torpentem expergescit, frigiditatem calore temperat, laxantem madorem astringit, extrorsura erumpentia atque diffluentia coercescit, olfactu suavi delectat: vices demum fulcire ad vitam prorogandam potest."

§ Gen. ix. 20, 21.

nerously exposed themselves to danger for the benefit of mankind. Noah had doubtless tasted grapes before, and found them harmless; and it was impossible he should know (until experience taught him) that *fermentation* gives an *inebriating quality* to liquors, or would produce a spirit in the juice of the grape which it did not contain before.

NOT long after wine, it is probable that beer was discovered; for Herodotus informs us, that in the corn provinces of Egypt, where no vines grew, the people drank a sort of wine made of barley*, *βίρω ἐκ κριθῶν πεποσημένω*. And this seems † to be the strong drink mentioned, together with wine, in many places of the old testament ‡.

IN short, the several improvements made with respect to the different sorts of aliment used by men in different periods of time from the creation to Moses, seem to have proceeded nearly in the following order, *viz.* fruits, seeds, herbs, bread, milk, fish, flesh, wine, ale, to which may be added butter, honey, oil olive, eggs, and cheese. But as aliment came in process of time to be improved to such a high degree, that a thorough discussion of it would take up too much room here, I shall only point out the principal Authors who have treated on this article.

* Euterpe, sect. 77.

† Distilled liquors were not heard of in any part of the world, known to Europeans, for many centuries, after the time of Moses and the other writers of the old testament.

‡ Lev. x. 9. Numb. vi. 3. 1 Sam. i. 25. Mic. ii. 11.

C H A P. IV.

Of the Writers on Aliment.

THE necessity of food, which supports life; contributes to restore health, and administers pleasure, has induced some eminent men, in most ages and nations, to consider it, and to form the best rules they could to direct people in the choice of it, under the various circumstances of life. It is amazing to think what myriads of vegetables and animals the munificence of the creator has provided on the earth, and in the waters, for the use of man. From this immense store, Moses* was the first who with great judgment selected some of the animal kind for food to the Jews, and in his history mentions several vegetable productions used by that people; which vegetables and animals make the principal part of the sustenance of mankind, in all nations of the world, to this time, viz. bread, wine, milk, honey; quadrupeds that divide the hoof, and chew the cud; all the feathered kind, a few only excepted; and fishes that have fins and scales.

NEXT to him, though at the distance of more than eleven hundred years, came Hippocrates †, who marks the qualities of several sorts of aliment with regard to health, and whose rules of diet (especially

* Moses, according to the reverend and learned Mr. Shuckford, was born A. M. 2433. Connect. vol. 2. lib. 9. pag. 376. Octavo.

† The most learned dean Prideaux says, that Hippocrates flourished in the time of the Peloponnesian war, which Mr. Shuckford reckons to have happened about the year of the world 3570. Connect. vol. 2. lib. 9. pag. 414.

in acute distempers) are among the best we have at this day.

CORNELIUS CELSUS, who flourished in the time of Tiberius, has concisely indeed, but with his usual elegance and propriety, treated on this subject from the beginning of the eighteenth chapter to the close of his second book.

XENOCRATES, who lived also under the reign of Tiberius, wrote a Treatise on fishes, which was in some estimation with Galen, and is published in the collection of Photius; but I cannot say that it will now be of great use to mankind.

DIOSCORIDES, who seems, by what himself says * in the beginning of his work, to have been physician to one of the Roman armies in Nero's Time, has dispersed his observations upon different aliments throughout his materia medica, but has chiefly thrown them into his second and fifth books.

CÆLIUS APICIUS †, about the time of Trajan, wrote ten books on the art of cookery: Whether his manner of dressing food might be to the taste of his cotemporaries, I shall not determine; but will venture to say, that he has studied health very little in his dishes. Among his other refinements he has quite spoiled the simple and wholesome ptisan of Hippocrates, by his addition ‡ of dill, hogslard, savory, coriander-seeds, vetches, pease, beets, fennel, and mallows.

GALEN follows next; he flourished in the reign of Marcus Aurelius Antoninus; and in his books.

* Nosti nostram militarem vitam. Versio commun.

† This was not the famous epicure Apicius, of whom we are told so many extraordinary stories by Pliny and Athenæus.

‡ De re culinari, lib. 4, cap. 4.

concerning the nature of aliments, and in some other tracts *, gives such a rational account of the various kinds of food used in his time, and of their effects on different constitutions, that his writings are the basis, and model of almost all that has been advanced on the same subject since his time.

AFTER him Oribasius, archiater to Julian the apostate, bestows upon aliment the whole fourth book of his synopsis, three books of his collections, and several chapters of his directions to Eunapius.

AETIUS, who lived in the latter end of the fifth century, treats this subject in the second book of his first Quaternion.

PAULUS ÆGINETA wrote in the seventh century, and gives an epitome of the nature of aliments in his first book, from the seventy-third to the ninetieth chapter inclusively.

SIMEON SETHI, the copier of Michael Psellus, lived in the eleventh century, under the reign of Michael Ducas, and dedicates to that emperor a treatise on the nature of aliments.

AND the last Greek, Actuarius, who practised physic with good reputation at Constantinople in the thirteenth century, touches the article of aliments slightly.

AMONG the Arabians, Isaac Israelita, the adopted son of Solomon king of Arabia, (which princely Author has been commented upon by Petrus Hispanus, afterwards pope John XXI.) Serapion, Rhases, Avicenna, and Averrhoes, have handled this subject.

SEVERAL Italians, French, and Germans, have written upon aliment: Arnoldus de villa nova,

* De succor. bonit. et vitio. De attenuante victus ratione.

Mich. Savonarola, Carolus Stephanus, Ludovicus Nonnius, Petrus Castellanus, &c. It has also been treated in verse by the *Schola Salernitana, Castor Durante*; and some sorts of fish have been elegantly described by *Ausonius* in his *Mosella*.

THE three exotick liquors also, tea, coffee, and chocolate, so much in common use among us; and tobacco, which has no small influence on health, have been severally treated of by various authors: Tobacco by king *James I, Simon Pauli, and Joannes Neander Bremensis*: Chocolate by doctor *Chub of Warwick*; and tea by the learned doctor *Short of Sheffield, and others*.

BUT as it would be too tedious to give a detail of all that have laboured in this search into the nature of aliments, I shall only recommend to the curious some of the most eminent, whose works seem to have exhausted all that is valuable in this branch of knowledge. These are *Galen, Joannes Bruyerinus Campegius de re cibaria, Julius Alexandrinus salubrium, sive de sanitate tuenda, Melchior Sebizius de alimentorum facultatibus*; and to the English reader (who must mind rather the sense than the stile) "Health's improvement, or rules comprizing the nature and manner of preparing all sorts of food used in this nation," by doctor *Mouffet*, and enlarged by the famous *Christopher Bennet*, author of the *Theatrum Tabidorum*: Or, if he chuses a short, useful, and entertaining discussion of this subject, let him consult the learned and ingenious doctor *Arbuthnot's* excellent essay concerning the nature and choice of aliments.

HAVING thus mentioned the high degree of salubrity and elegance given by time and industry to man's aliment, which was the only one of the

six things necessary to animal life known to the first and most remote ages of the world, let us next examine the gradual improvements made in the remaining five: Or, in other words, let us inquire into the first rudiments and progress of the art of restoring, but especially of preserving health among mankind.

C H A P. V.

Necessity invented every branch of physic.—First rudiments of it among the Babylonians and other nations.—Egyptian method of preserving health.—Earliest instances of the care of old age.—Pythagoras the first who recommended temperance and moderation, as conducive to health.—Herodicus inventor of the medicinal gymnastics.—Plato's absurd censure of this invention.—Herodicus not the author of the three books on diet, published among the works of Hippocrates.

HIPPOCRATES is of opinion, that mere necessity, compelled men to invent both the art of preserving health, and the art of restoring it when lost: As to the former, he remarks particularly, that “the distempers * arising from the
 “ coarse aliment which men at first made use of,
 “ obliged them to study the most proper methods
 “ of preparing bread from grain, and of dressing
 “ other vegetables in such a manner as should
 “ render them more wholesome:” And as to the latter, “One cause (says he) which made it necessary to study the art of restoring lost health, was
 “ the great difference to be observed between the

* De princ. med. sect. 1. pag. 9. line 37. edit. Fœsius

“ diet of the healthy and that of the sick.” People † had frequently seen, that what agreed with the strong, did hurt to the infirm, and therefore it was indispensably requisite, that different rules of diet, as well for the restoration of the sick and infirm, as for the preservation of the strong and healthy, should be established.

BUT this required time and experience, and, in fact, a long time it took to establish such rules; for tho’ the beginning ‡ of the medical art must have been very antient, the progress was exceeding slow, and many ages elapsed before it could properly be called a science. We learn from Herodotus §, that the Babylonians obliged themselves by an express law to carry their sick into places or streets of publick resort, and to enquire of all who passed by, whether they ever had, or saw any such distemper as the sick person present laboured under, and what was done to remove it? It is obvious that the progress of physick must be very slow under this regulation, tho’ it really was *νομὸς σοφιστάδος*, “ a most prudent institution,” as the author calls it, and the best which could be contrived at that time. It was undoubtedly a proper method to gain experience, and in process of time to bring to maturity a science which was then in embryo. Hippocrates seems to have been of this opinion, for in his short book of precepts, he admonishes physicians not to think it below them to learn from the vulgar, the history of any

† De princ. med. pag. 9. line 13. et. seq.

‡ Medicina quondam paucarum fuit scientia herbarum, quibus sifteretur fluens sanguis, vulnera coirent: paulatim deinde in hanc pervenit tam multiplicem varietatem.—Non minus quam ceteræ artes, quarum in processu subtilitas crevit. Senec. epist. 95.

§. Clio, cap. 197.

cure which could be of use to them; and adds, " I am persuaded that the whole art was first acquired in this manner.*" Strabo † also says, that the same custom of carrying their distempered people into the streets for advice, prevailed among the Egyptians and Portuguese.

THIS law of the Babylonians and Egyptians produced another custom which likewise became a large source of medicinal knowledge. When a remarkable cure was performed on any person of distinction, this person (perhaps from gratitude or benevolence) was sometimes at the expence of erecting a pillar, or fixing a table in one of the temples of Æsculapius, on which the means of his cure was written in legible characters, for the benefit of the public: And Strabo ‡ says, it was pretended that Hippocrates drew a great deal of his knowledge from those consecrated tables, which were put up at Cos in the famous temple of Æsculapius. The same sort of tables were hung up in the temple of Isis, to which Tibullus § seems to allude, where he says,

Nunc Dea, nunc succurre mihi, nam posse mederi
Picta docet templis multa tabella tuis.

And Mercurialis § informs us, that there is one of those tables in marble, taken out of the temple of Æsculapius in the Isle of Tiber, still to be seen at Rome in the Maffæan palace.

* Οὐτως γὰρ δόξω πάσαι τῆς τέχνης ἀπὸ ἰχθῆται.

† Geograph. lib. 14. pag. 972. edit. Wolters.

‡ Narrant Hippocratem e dedicatis ibi curationibus exercuisse eas quæ ad victus rationem spectant. Ejusd. vers. pag. ead.

§ Lib. eleg. 3.

§ De arte gymnast. lib. 1. cap. 1.

As to that branch of physic which regards the conservation of health, there was no considerable progress made in it, which has come to our knowledge, any more than in curing distempers, until very near the time of Hippocrates. It is true, Diodorus Siculus * seems at first sight, to give us a favourable idea of the antient Egyptian physic in general, when he informs us that the physicians of Egypt were maintained at the public charge, and obliged by the laws to conform their practice to rules invented and settled by men of great judgment and experience in former times, which were recorded in certain venerable books, for the benefit of posterity; and from those rules the modern physicians durst not depart, but at the peril of their lives, in case any patient should happen to die under the new regimen; whereas their persons and reputation were quite secure by adhering to the old. But when we come to examine the specimens, with regard to the conservation of health, which our historian has preserved, we comfort ourselves under the loss of those sacred registers. “To prevent distempers, (says he) they prescribed glysters, purging potions, vomiting or fasting every second, third, or fourth day:” And he subjoins their reason for this smart discipline, because, according to those antient physicians, “the greatest part of the aliment we take in, is superfluous †, which superfluity is the cause of our distempers.”

HERODOTUS mentions the same sort of discipline among the Egyptians, tho’ not practised

* Bibl. hist. lib. 1. p. 92. ed. Westling.

† Bibl. hist. lib. 1. pag. 92.

quite so frequently: "The Egyptians. (says he) vomit and purge themselves thrice every month, with a view to preserve their health, which in their opinion is chiefly injured by their aliment *."

To form any clear or connected judgment from those short and scattered hints, which may be gleaned among authors of remote antiquity, concerning the preservation of health, it will be necessary to distinguish four periods of human life, to each of which a peculiar care is due with regard to health, namely, childhood, youth, manhood, and old age. It is true, that parents, in antient times, took the same care of their infants as they did of themselves, but their care extended no farther than to provide for their subsistence from day to day, either by the breasts, or such coarse aliment as they could afford: which cannot properly belong to the art of preserving health. Of these four periods, the Gerocomicé, or care of old age, is the only one (so far as I know) taken notice of before Pythagoras.

THE earliest † instance we meet with of the Gerocomicé, is the care which king David's servants took of him, when he was old ‡ and stricken in years, by getting a healthy young virgin to lie in his bosom, which was a very proper means to warm and cherish him; and which (when kept

* Euterpe, sect. 77.

† We have indeed, long before David's time, in the 27th chapter of Genesis, an account of savoury meat, bread and wine, prepared for Isaac when he was very old; but that seems to have been rather an occasional repast to raise his spirits, and support his strength for a short while, than any thing done with regard to the preservation or restoration of health.

‡ 1 Kings i. 1.

within the bounds of innocence and decency) is justified by the opinions of Galen *, Paulus Ægineta †, lord Verulam ‡, and Boerhaave §.

HOMER, whom Pliny ¶ justly calls, “the source of sublime ideas,” and who, in several places of his poems, does great honour to physicians, comes next, and seems to have been acquainted with the γέροκομικη, by the proper care of old age, which Ulysses recommends to his father Laertes, in the last book of the Odyssey, line 258.

—ἐπὶ λούσαιτο φάγοι τε,
 Εὐδύμναι μαλακῶς· ἢ γὰρ δίκη ἐστὶ γιρότων.

Warm baths, good food, soft sleep, and generous wine,
 These are the rights of age, and should be thine.

POPE.

On this passage Galen remarks that “the poet’s rule was excellent, which directed an old man, after bathing and refreshing himself with food, to take some rest; for old age being naturally cold and dry, those things which moisten and warm, as bathing, eating, and sleeping, are the most proper for it.”

* “Nothing contributes so much to a good digestion as a sound healthy human body touching the stomach.” Meth. med. lib. 7. cap. 7. & De simpl. med. facult. lib. 5. cap. 6.

† “It is very difficult to relieve a person who is cold and dry at the same time; and a plump healthy boy to lie in his bosom is one of the best remedies he can use.” Lib. 1. cap. 72.

‡ Verulam recommends fomentations of living animals, from history. Hist. vit. et mort. 8vo. pag. 300.

§ Boerhaave frequently told his pupils, that an old German prince, in a very infirm state of health, being advised to lie between two young virtuous virgins, grew so healthy and strong, that his physicians found it necessary to remove his companions.

¶ Ingeniorum fons Homerus. Hist. nat. lib. 17. cap. 5. And again, Homerus quidem doctrinarum et antiquitatis pater, lib. 25. cap. 2.

BUT.

BUT with respect to the preservation of health in all periods of life indiscriminately, tho' Moses * stigmatizes gluttony and drunkenness as immoralities, which deserve the severest punishment; and Solomon † says that intemperance biteth like a serpent; and Homer ‡ declares against drinking wine to excess; yet Pythagoras §, the Samian, seems to have been the first who recommended universal moderation and temperance as conducive to health. He calls drunkenness an enemy to the whole man; and maintains, that no man, who values his health, ought to trespass on the bounds of moderation; either in labour, diet, or concubinage. To this account, which Laërtius gives, Jamblichus || adds, that the scholars of Pythagoras used unction and bathing, and were trained up to such exercises as seemed most proper to increase their bodily strength; but I greatly suspect that, in this place, he confounds Pythagoras the philosopher with Pythagoras the exercitator mentioned by Pliny **, who trained up his champions for the combat, without the least regard to their health, and first taught them to eat flesh.

* Deut. xxi. 20. † Prov. xxiii. 32.

‡ Οὐκ ὅς τε πρᾶσι μελιτῶδες, ὅστε καὶ ἄλλους ἐλάττει, ἢ ἄν μιν χερσὶν ἔλη, μὴδ' αἰσμα πῶν. Od. lib. 21. l. 293.

To copious wine this insolence we owe,
And much thy better wine does overthrow.

POPE.

§ Diog. Laërt. in vit. Pythag. edit. Menag. Segm. 9. In this passage, the sense will oblige every physician (if I mistake not) to adopt the correction of Mer. Casaubon, and to retain *πέσας*, contrary to the alteration made by Jf. Casaub. and to insert the addition made by Hen. Stephens.

|| De vita Pythag. cap. 21. ** Hist. nat. lib. 23. cap. 7.

AFTER:

AFTER Pythagoras, Iccus †, a physician of Tarentum, thought it necessary to recommend temperance, together with exercise for the preservation of health; and his own sobriety was so remarkable, that *the repast of Iccus* became a proverbial phrase for a plain and temperate meal.

HERODICUS, nevertheless, one of the preceptors of Hippocrates, has been generally celebrated as the inventor of this art of preserving health, and of teaching the infirm to regulate their exercise and diet in such a manner as to prolong their lives for many years; and is censured by Plato ‡ for thus keeping people of crazy constitutions alive to old age; whereas, in his opinion, if a tender person did not soon recover strength, he had better die out of the way. “ He was master of an academy, “ (continues Plato) where youth were taught their “ exercises, and being himself valetudinary, he “ contrived to blend exercise with such other medicinal rules, as preserved his own infirm constitution from sinking under his complaints; thus “ he dragged on a dying life to old age, and did “ the same injury to several other valetudinarians.” Plato was of opinion, that an infirm constitution is an obstacle to the practice of virtue, because it makes people imagine themselves to be always ill, and mind nothing but their own wretched carcases; for which reason, continues he, “ Æsculapius “ would not undertake to patch up persons habitually complaining, lest they should beget children as useless as themselves, being persuaded

† Steph. Byzant. de urbia. in voce Taras.

‡ De republ. lib. 3.

“ that it was an injury both to the community,
 “ and to the infirm person himself, that he should
 “ continue in the world, even tho’ he were richer
 “ than Midas *.”

If this tenet of Plato is rational or humane, let us never blame the Hottentots † for carrying their parents into the woods to die there, when they become so decrepid with age as to be unable to help themselves. Nor ought we to find fault with the Padæan Indians, of whom Herodotus ‡ relates, that “ when any man fell sick among
 “ them, his next neighbour killed him directly
 “ (lest he should lose his flesh) and eat him up.
 “ For which reason, as soon as any of that nation
 “ found himself indisposed, he withdrew privately
 “ into some desert place, where he had no man-
 “ ner of care taken of him dead or alive,” unless he happened luckily to recover, and return home of himself.

It is a misfortune, indeed, to have an infirm constitution. But are all infirm persons useless? Are not their understandings frequently clear, and of great service to the community, when their bodies are unfit for labour? And what must become of the pleasure and reward of beneficence, if all objects of compassion were permitted to perish for want of assistance? Besides, how many recoveries from various ailments does every age and every country produce! And how many persons, after such recoveries have become a benefit and an ornament to their country!

* ἐπί θεραπευτῶν αὐτοῦ. εἶδε ἐν Μίδε πλουσιώτατος εἶναι. De Re-
 publ. 3.

† See Kolben’s history of the Cape of Good Hope.

‡ Thalia, sect. vel cap. 99.

WHEN we consider, therefore, that Plato, who, next to Socrates, was the glory of the heathen world, could not, with all his scrutiny, and uprightness of intention, avoid falling into this and other vile and gross absurdities *; should not our hearts glow with gratitude and praise to the blessed author of the christian system, which has made the path of virtue so clear and plain, that no man is in danger of losing his way, but he who shuts his eyes?

BUT to return: The Gymnastic art, to season † youth for the fatigues of war, and harden champions † for the combat, was, indeed, practised

* I mean, among other immoralities, the shameful licence of promiscuous concubinage, which he gives to men and women at a certain age. I shall cite his own words from the latin translation of Serranus, to shew that I do not charge him wrongfully: "Quasdo igitur jam mulieres et viri ætatem generationi aptam egressi fuerint, licere viris dicemus. cuicumque voluerint, præterquam filix, et matri, et filiarum filiabus, commisceri; licere et mulieribus cum quolibet copulari, præterquam filio atque patre, ac superioribus, et inferioribus eorundem." De republ. lib. 5. pag. 461. tom. 2. interpret. Serrani.

The Stoics also allowed the same scandalous indecencies: "Placet item illis uxores quoque communes esse inter sapientes, ut quilibet illi congregiatur quæ sibi occurrit." Laërt. vit. Zen. sect. 131.

— They likewise banish pity (which Zeno ranks with envy and grief) from their wise man. *This is our celebrated Portic philosophy,*

† Homer represents the Grecian soldiers as highly entertained with their warlike exercise.

——— *λαίε δὲ παρὰ ῥηγμῶν θαλάσσης*
Δολκίστην περπερῶ———

Iliad 2. lin. 280.

——— on the sandy shore

The troops in air their sportive jav'lins throw,

Or whirl the disk, or bend the stubborn bow.

POPE.

‡ We are told by Pliny, lib. 7. cap. 56. that the institution of the Olympic games was as old as Hercules.

long

long before the time of Herodicus, but he is generally reputed the first who introduced the medicinal gymnastic. He was of Selymbria a town in Thrace, or, as others conjecture, of Lentini in Sicily. Plutarch says of him, that labouring under a decay, which he knew could not be perfectly cured, he was the first that blended the gymnastic art with physic, in such a manner as protracted to old age his own life, and the lives of others afflicted with the same distemper.

It is the opinion of the learned and judicious Daniel Le Clerc †, that the three books on diet, ascribed commonly to Hippocrates, and published with his works, might have been composed by Herodicus; but in this I beg leave to differ from him, for three Reasons: *First*, Because Hippocrates, in a book, ‡, allowed by all the world to be his own, observing, “ that the antients wrote nothing concerning diet “ worth taking notice of,” could not decently have omitted to do honour or justice to his preceptor, had he been author of those excellent tracts. *Secondly*, Because in the passage §, on which this accurate historian seems to build his conjecture, Galen does not ascribe three books on diet to Euriphon, Phaon, Philistion or Ariston, but the single book concerning *wholesome diet*, on which Galen himself has written a commentary, where he ascribes that performance to Polybius, as we shall see hereafter. And *thirdly*, Because these books discover such a thorough knowledge of the nature

† Le Clerc. hist. de la medic. par. 1. liv. 3. ch. 13.

‡ De rat. vict. in acut. sub principio, he says, ἀνὰ τὴν ἰδίαν περὶ τῆς διαίτης ἢ ἀρχαίαι ξυμπραξάν ἐδιδον ἀξιον λόγον.

§ Compare Le Clerc, in the place last cited, with Galen in libros Hippoc. de rat. vict. in acut. comment. 1. num. 18.

and effects of aliment, according to the theory of those times, and accommodate diet so judiciously to the preventing and removing various complaints, that it is not likely a master of an academy should be capable of composing them, nor indeed any man but an accomplished physician, which Herodicus was not; of whom Hippocrates complains that he killed * several persons, by obliging them to use exercise in a fever.

C H A P. VI.

Of Hippocrates.—His general and particular precepts relating to the preservation of health.

WE come now to a period of time much more enlightened than the former, by the genius and industry of Hippocrates, justly called *the father of physic* †, who has done more towards the advancement of that science, than any other man ever did. He was born in Cos, an island in the Archipelago, about 458 years before the Christian æra, of a noble family, being lineally descended by his father from Æsculapius, and by his mother from Hercules, and (which is most to his honour) was a man of strict virtue and piety. Among other parts of physic he treats on the pre-

* Herodicus febricitantes tum multis obambulationibus, tum multa lactâ et fomentis conficiebat, idque malè. Febris enim fami, lactæ, obambulationibus, cursibus, frictioni, iis utique omnibus est inimica. De morb. vulg. lib. 6. sect. 3. aphor. 23.

† Primus Hippocrates medicinæ præcepta clarissimè condidit. Plin. nat. hist. lib. 26. cap. 2.

It is necessary to acquaint those who may be disposed to compare the citations from Hippocrates with the original, that they must look into the edition of Fœsius, printed at Geneva an. 1657. in two vols. fol.

servation of health, with greater extent and accuracy than one would imagine, considering the time * in which he lived, and the little help he had from his predecessors.

THAT we may have a full and clear apprehension of his directions on this subject, I shall endeavour, *first*, to range in order all his precepts and remarks on the *Six articles necessary to life*, vulgarly called the NON-NATURALS. *Secondly*, I shall take notice of some general rules which he has laid down with regard to health, and of his observations upon them.

THE six articles indispensably necessary to the life of man are, air, aliment, exercise and rest, sleep and wakefulness, repletion and evacuation, together with the passions and affections of the mind.

OF A I. R.

THOSE cities † which are situated towards the west, and are so covered from the east, that the salutary winds from that point, have no access to blow away their noxious vapours, must of necessity be unhealthy ‡, and their inhabitants subject to many and bad distempers.

* Hippocrates, according to dean Prideaux, lived about the time of the Peloponnesian war, i. e. as the reverend Mr. Shuckford thinks, A. M. 3570.

† De aer. loc. et aq. pag. 283. lin. 12. edit. Fœsii.

‡ This, and some other aphorisms concerning the winds, relate chiefly to the climate and situation of Greece, and the adjacent countries, where Hippocrates made his observations, and where the east and north winds blow over immense tracts of land, divided here and there by narrow seas; but are not so applicable to the countries where these winds blow directly from the ocean. With regard also to the heat and cold of the seasons, the more northern climates do not require so cooling a diet in summer as that where our author lived.

THE air has an extraordinary influence on the human body in reference to health and sickness, since we see that a man may live two or three days without aliment, but can scarce subsist a moment without air *, so necessary it is to the life of every animal. When therefore we find a distemper prevail † universally, and seize on persons of all ages and conditions, how different soever their diet or manner of living may be; it is evident that such a distemper cannot arise from what people eat or drink, because they differ widely in that respect, but from the air which surrounds them, and which they all breathe in common; and it would be needless, in such a case, to alter the method of life that has always agreed with them; nay, it would be hurtful, because sudden changes, in all cases, are dangerous. The only course to be taken under such a calamity, is to alter the nature and qualities of the air, (if that be practicable) or to remove from it to an air which is untainted.

WE ought to attend to the qualities of the air, whether it be hot ‡ or cold, gross or fine, moist or dry, and how it varies with regard to these qualities; and we must by experience learn the different effects of those variations upon our health: And he who would attain to any useful knowledge in the art of healing, must observe the seasons of the year, for they differ extremely one from the other, and great are the changes which happen in them; and he should especially observe those

* De flatib. pag. 296. lin. 50.

† De nat. hom. pag. 228. lin. 50. et seq.

‡ De morb. vulg. lib. 6. sect. 8. aph. 18. pag. 1199.

§ De aër. loc. et aq. in princip. pag. 280.

winds which are most familiar to the country where he lives.

THE North* wind blowing long, renders the body compact, strong, nimble, and of a good colour, for it purges the air from gross vapours, makes it pure and bright, and therefore is of all winds, generally speaking the most healthful: But still it is attended with some inconveniencies, because to persons unaccustomed to it, and to tender constitutions, it gives coughs †, sore throats, pain of the breast, costiveness, chillness, and strangury.

THE south wind ‡, on the contrary, moistens the brain too much, weakens and relaxes the body, and occasions defluxions.

A very dry § season is, upon the whole, more healthful than a very wet one.

It is known by experience, that we can eat more ||, and digest better, in winter and spring, than in summer and autumn; and indeed the former, especially the winter, require a more plentiful nourishment than the latter.

IN winter **, to resist the cold, let your aliment be dry and warming. In spring ††, when the weather grows mild, the diet should be accommodated to the season, and somewhat cooler and lighter. In summer, when the season becomes hot and dry, the food should be cooling, and the

* De morb. sac. pag. 308. lin. 15. et seq. vid. *in super*, sect. 3. aphor. 17. pag. 1247.

† Sect. 3. aphor. 5. pag. 1247.

‡ De morb. sac. pag. 308. lin. 26. et sect. 3. aphor. 17.

§ Sect. 3. aphor. 15.

|| Sect. 1. aphor. 15. et 18. pag. 1243.

** De vict. rat. lib. 3. pag. 366. lin. 43.

†† Ibid. pag. 367. lin. 37. et seq.

drink diluting. But after the autumnal æquinox †, your aliment should again be of a warming nature, and your cloaths ‡ thicker by degrees, as you approach the winter.

THE spring §, generally speaking, is the most safe and healthy, but the autumn the most dangerous and sickly of all the seasons. And, particularly, the spring and beginning of summer agree best with children, and very young persons; summer and the beginning of autumn with old men; and the latter end of autumn, together with the winter, are healthiest for the middle aged.

THE spring breeds blood ||, the summer bile, and the other seasons such humours as correspond with their respective natures. The spring ** also is the best season of the year to lose blood, or take physic; if either of them should be proper, and can be conveniently deferred to that time. When the temperature †† of the air corresponds with

† Ibid. lib. 3. pag. 368. lin. 34. et seq.

‡ It is very remarkable, that tho' Hippocrates admonishes people to accustom themselves gradually to a cooler diet, as the spring grows warm, yet he never advises them to lay aside any of their winter garments at that time; whereas, in autumn, he expressly orders them to guard against the approaching cold, *ἐσθῆτι παχίᾳ*, by thick cloathing. And if he was so cautious in the warm climate of Greece, surely we who live in this island, where the weather often varies from hot to cold three or four times in a day, should never lay aside any of our winter cloathing before the month of May, nor even then, unless the weather should be uniformly warm.

Our judicious Sydenham observes, that the giddy practice of throwing aside our winter garments too early in the spring, and of exposing our bodies, when overheated, to sudden colds, has destroyed more than famine, pestilence and sword. De feb. intercurrent. sect. 4.

§ Sect. 3. aphor. 9. pag. 1247.

|| De humor. pag. 50. lin. 53.

** Sect. 6. aphor. 47. pag. 1258.

†† Sect. 3. aphor. 8. pag. 1247.

the nature of the respective seasons, the year is healthful, and distempers slight; but when the weather is unnatural with respect to the seasons, distempers are stubborn. Sudden transitions *, from great heat to extreme cold, are dangerous, and always produce bad distempers; and when these changes happen in the same day for any considerable time, we may expect stubborn autumnal diseases.

WE find that not only the form and constitution of men's bodies, but their manners also, have a great affinity with the nature of the climate which they inhabit. In Asia †, where the seasons are mild, and vary but little with regard to heat or cold, the productions of the earth are larger, and more beautiful than in Europe, and the men more humane and benevolent, but at the same time more indolent and slothful; for it is the extreme changes of the seasons from heat to cold that rouse the passions of the Europeans, and excite them to illustrious achievements. It is true, that the nature of the Asiatic government ‡ contributes to make the men of that country still more inactive than otherwise they would be; for as they live under arbitrary and despotick princes, without liberty or property, it is not worth their while to undergo dangers in performing gallant actions, where the whole fruit of their labour is reaped by an insolent tyrant, and the brave adventurers have nothing but wounds and death for their portion. Under such an absolute and lawless

* Sect. 3. aphor. 1. et 4.

† De aër loc. et aq. pag. 288. lin. 50. et seq.

‡ Ibid. pag. 290. lin. 35. et seq.

government, it is the interest of a valiant man to be reputed a coward.

OF ALIMENT.

HE who would thoroughly understand this subject, must not only know * what qualities every sort of food is endowed with from nature, but also what new qualities it receives from art, in the various ways of dressing it. Flour of wheat, for instance, mixt with the bran, is opening, and of small nourishment; but when pure and unmixt, nourishes much, and is not at all opening. And it is of great moment † to a man's health, whether his common bread be white or brown, well or ill baked.

EVERY physician ‡ should endeavour to understand the nature and constitution of different persons, with respect to what they eat and drink, and should not only make himself acquainted with the various complaints which arise from various sorts of aliment, but should also know why they happen to some, and not to others. Cheese §, for example, is hurtful to some, but agrees perfectly well with others; the cause of such a difference, therefore, should be found out, and the nature of those humours known to which cheese is an enemy, that so they may be corrected, or cheese avoided.

THE human body contains four humours ¶,

* De vict. rat. lib. 2. pag. 355. lin. 4. 25.

† De prisc. medic. pag. 13. lin. 17.

‡ Ibid. pag. 16. lin. 47. et seq.

§ De prisc. med. pag. 17. lin. 7.

¶ De natur. homin. pag. 225. lin. 41. et seq.

very different with respect to heat, cold, moisture and dryness, viz. Blood, phlegm, yellow bile, and black bile, which several humours we see frequently brought up by vomiting, and discharged by stool. Health consists in a due mixture of these four, and whatever produces a redundancy in any of them, does hurt.

It is very injurious to health to take in more food * than the constitution will bear, when, at the same time, one uses no exercise to carry off this excess. On the other hand †, it is equally pernicious to take in less nourishment than the constitution requires; for abstinence has great power over our nature, either to procure health, or to cause weakness and death. Many and various are the evils which arise from fulness, but those which proceed from emptiness are no less grievous; and it requires diligent observation to distinguish them, since we have no rule by which we can exactly know them, but only what we feel within ourselves. It is therefore a difficult task to point out the beginning of any trespass either on the side of fulness or emptiness; and he who falls into the fewest errors is much to be commended.

A variety ‡ of aliments, discordant in their nature, should not be indulged at one meal, because they make a disturbance, and create flatulencies in the bowels.

THO' larger § meals than nature requires, will certainly breed distempers, if persisted in; yet, upon the whole, it is to be observed, that a very

* De flatib. pag. 297. lin. 36.

† De prisic. med. pag. 11. lin. 17. et seq.

‡ De flatib. p. 297. lin. 38.

§ Sect. 2. aph. 17. p. 1245.

spare and abstemious diet is more dangerous * than one somewhat free and full; and a man suffers more from a small trespass on habitual abstemiousness, than from a considerable diminution of a full diet. A precise custom of living therefore, is not safe.

WHATEVER we eat which the stomach † can subdue, turns to good nourishment; but what we cannot digest has a contrary effect, and contributes to waste the body. Some ‡, from the strength of custom and constitution, can eat three plentiful meals every day. Those who have used themselves to make two meals in a day, if they should happen to lose one of them, grow weak and faint, have no inclination to work, and complain of pain at their heart. They feel also their bowels hollow, their eyes heavy, their mouth bitter, and their extremities cold. Nevertheless, when they have, by any accident, lost one of their meals, (suppose their dinner) they ought not to eat a plentiful supper to make up their loss; for, if they do, it will lie heavy on their stomach, and they will have a more restless night after it, than if they had both dined and supped heartily. He, therefore, who has been accustomed to two meals in a day, and has missed his dinner, and fasted beyond his usual time, and finds himself empty and faint, should avoid cold, heat, and labour for that day, and should make a lighter supper § than usual of some harm-

* Sect. 1. aph. 5. pag. 1243.

† De loc. in horn. pag. 422. lin. 19.

‡ De rat. vict. in zcut. pag. 388. lin. 36. et seq.

§ I have often experienced the benefit of this precept, when, in the hurry of country practice, I chanced, at any time, to lose my dinner; for if I eat a hearty supper of flesh meat, I was sure to be sick,

harmless spoon meat, rather than of any strong solid food.

ON the other hand *, if they who have been accustomed to one meal in a day, should chance to eat two, they soon grow dull, heavy and thirsty; and this single trespass has been the source of great distempers to many.

HE who has taken a larger † quantity of food than usual, and feels it heavy and troublesome in his stomach, his wisest course will be to vomit it up directly ‡.

THAT sort of aliment is justly reckoned the lightest § which being taken in a moderate quantity, or to some little excess, causes neither fulness, nor griping, nor wind, but is quickly digested, and, after a proper time, easily discharged. That sort, on the contrary, is heaviest, which being taken in a moderate, or even in a small quantity, cannot be subdued by the stomach, but occasions a fulness and uneasiness.

EXCESS ¶ in drinking is not quite so bad as in eating.

GROWING ** persons have much innate heat, and therefore require a pretty large supply of nou-

rick, but if I supped on a dish of chocolate, or a mess of water-gruel, or toast and negus, I rested perfectly well:

* De princ. med. pag. 12. lin. 1.

† De affect. pag. 530. lin. 15.

‡ The wise son of Sirach confirms this precept, and says, Ecclus. xxxi. 21. "If thou hast been forced to eat, arise, go forth, vomit, and thou shalt have rest." And most certain it is, that hundreds have lost their lives, and thousands have suffered sickness and pain, from their ignorance or neglect of this rule.

§ De affect. pag. 527. lin. 34.

¶ Sect. 2. aph. 11. pag. 1244.

** Sect. 1. aph. 14. pag. 1243.

nishment, otherwise their bodies will waste away; whereas old people having but a small degree of heat, require only a small quantity of aliment; for too large a quantity would quite extinguish the little heat they have remaining.

THE sorts * of meat and drink most agreeable to the human body, and most conducive to good nourishment, health, and strength, are bread, flesh, fish, and wine; and yet if these are taken to excess, they bring on distempers and death sooner than aliments of a weaker, and less nourishing nature.

PREPARE † for persons of a weak and delicate constitution such food as shall not excite any flatulency, acid eructations, or griping; and give them such as shall be neither too opening nor binding.

WHEN ‡ a person recovering from a distemper, eats his meat heartily, and yet receives no strength, it shews that he eats more than he can digest; but if he eats very moderately, and receives no strength, it appears that there are bad humours in the body which should be evacuated.

WHEN § the body is impure or loaded with bad humours, the more you nourish it, the more you hurt it.

Of particular sorts of FOOD and DRINK in common use.

COARSE ¶ or brown bread keeps the body open, but does not nourish much: White bread

* De affect. pag. 528. lin. 17.

† De affect. pag. 527. lin. 27.

‡ Sect. 2. aphor. 8. pag. 1244.

§ Ibid. aphor. 10.

¶ De vict. rat. lib. 2. pag. 356. lin. 2. & seq.

pure, and separated from the bran, nourishes more; but opens less: Leavened or fermented bread is light in digestion, and passes easily through the body; but unfermented bread does not go off so easily, tho' it nourishes more, where the stomach can conquer it.

BREAD * baked to day, (provided it be not eat: hot from the oven) is, generally, preferable to that baked yesterday, and old flour makes but bad bread.

THE flesh † of wild animals is drier than that of tame, and of stall fed, than that fed by pasture. The flesh of animals, in the vigour of their age, and of such as are castrated, is best, and that of animals not used to any hard labour, is tenderest. The flesh ‡ of granivorous birds is not so moist or oily as that of ducks, and others which frequent the waters.

MUTTON § is good both for the delicate and the robust; but beef is heavy; and pork is proper only for the robust ¶ who use exercise, but is too strong for the weak and sedentary.

* De vict. rat. lib. 2. pag. 356. lin. 35.

† De vict. rat. lib. 2. pag. 358. lin. 16. et seq.

‡ Ibid. pag. 357. lin. 42.

§ De affect. pag. 528. lin. 51. et seq.

¶ Galen declares, that of all food, pork is the best and most nourishing to people of robust constitutions who use a great deal of exercise; and this he confirms from the experience of the athletes, or champions trained up for the olympic games: "Suppose two champions (says he) of the same strength, to use the same exercise, and feed on pork; if either of them shall change his diet, and live on an equal quantity of any other sort of meat for but one day, he will immediately find himself weaker; and if several days, he will not only grow feeble, but meagre also, for want of his proper sustenance." Claf. 2. de aliment. facult. lib. 3. cap. 2.

FISH *, that lives in stagnated waters, or that is very fat, is hard to digest; but such as lives near the sea shore is light. Boiled fish also is lighter than roasted. Bitter † things bind and dry the body; acid things make people thin and gripe the stomach; salt things promote stools and urine; fat and sweet things breed moisture and phlegm.

MILK ‡ is hurtful to those who are feverish, or afflicted with a headach; to those whose bowels are subject to a flatulency or grumbling; and to those who complain of thirst. It is bad also for such as void bile, or a considerable quantity of blood by stool; but good for the consumptive and emaciated; provided they have not a pretty sharp fever, or any of the above mentioned complaints, at the same time.

ONIONS §, leeks, radishes, are hot and acrimonious. Mustard and cresses will occasion a dysury. Celery is diuretic. Such herbs as are aromack and odorous, are heating. The colwort species resolves the bile. Lettuce is cooling and relaxing. Cucumbers are cold, crude, and hard to digest. Ripe pears open the belly, but unripe bind it. Apples of the acid kind, are more easily digested than the sweet and luscious. All sorts of pulse ¶ are windy, dress them which way you will.

HONEY **, taken alone, promotes urine, purges too much, and rather weakens than strengthens;

* De affect. pag. 529. lin. 10.

† Ibid. lin. 32.

‡ Sect. 5. aphor. 64. pag. 1255.

§ De vict. rat. lib. 2. pag. 359, 360.

¶ De vict. rat. in acut. pag. 404. lin. 28.

** De affect. pag. 529. lin. 50.

but mixt with other things, nourishes well, and gives a good colour.

OF WINE.

PURE * unmixt wine, drank too freely, weakens a man, which is plain to be seen by his actions.

SWEET † wines hurt the head less, and promote stools more than strong or dry wines, but they excite a flatulency in the intestines, and swell the bowels; nor do they agree with bilious habits of body, because they increase thirst. They also promote expectoration more, and urine less, than dry white wines. These are useful observations to which our ancestors were strangers. Tawny, or austere black wines, may be drank, with benefit, when the body is loose, provided there be no disorder in the head, and no impediment in spitting, or making water. It is likewise observable, that wine, diluted with water, is more friendly to the head, breast, and urinary passages; but wine alone, or mixt with very little water, agrees best with the stomach and bowels.

HUNGER ‡ is abated by a glass of wine.

OF WATER.

THESE waters § are best which spring from high places, and rising grounds; and it will recommend them still more, if their aspect be towards the ri-

* De princ. med. pag. 17. lin. 4.

† De rat. vict. in acut. pag. 392. lin. 23. et seq.

‡ Sect. 2. aphor. 21. pag. 1245.

§ De aer. loc. et sq. pag. 284. lin. 26.

ling sun; for such are generally limpid, light, and of a good flavour.

RAIN water*, collected in clean vessels, is light, sweet, and limpid; for that part of the water attracted by the sun, which produces rain, is the finest, and lightest of the whole. But this water is apt to grow putrid, by having a great many foreign particles mingled with it, to prevent which it will be proper to boil and strain it for use.

ALL waters are bad which are produced from ice † or snow ‡ dissolved, for the lightest and most subtle parts of the water fly off in freezing, leaving the grossest and heaviest behind. I cannot therefore approve of such water for any use. As turbid water from ice and snow is bad in winter, so standing water § is ill coloured, stinking and unwholesome in summer, and occasions various distempers.

THE healthy and ¶ strong may drink such water as comes in their way indiscriminately; but they who drink water for recovery of health, must be

* De aër. loc. et aq. pag. 285. lin. 6.

† De aër. loc. et aq. pag. 285. lin. 44.

‡ Boerhaave in his elem. chem. tom. 1. pag. 601. speaking of snow water, seems at first sight to contradict Hippocrates, and to affirm that snow water is pure and wholesome. But when we consider that Boerhaave speaks of such snow water as can never come into common use; and supposes (for chymical experiments only) his snow to have fallen in a desert, far removed from any inhabitants; and the surface of that snow to have been carefully collected; and concludes, that such snow water would be pure, light, and good; whereas Hippocrates speaks of common snow water impregnated with all the dirt and salts of the earth which it has washed: When we consider this wide difference, I say, we shall find no contrariety in their sentiments.

§ De aër. loc. et aq. pag. 283. lin. 34.

¶ Ibid. pag. 284. lin. 38.

careful in the choice they make. The lightest, purest, and softest waters are most fit for them, who are apt to be costive, whereas the hardest waters do most service to those whose bowels are too moist and phlegmatic.

HOT * temperaments receive benefit from drinking water. Water drinkers † have generally keen appetites.

OF MINERAL WATERS.

HIPPOCRATES just mentions hot ‡ springs, chalybeate springs, nitrous § springs, and other mineral waters; “but having had little experience of their virtues, he gives them no great character.”

OF BATHING.

EVERY physician || ought to know what hurt may be done by unseasonable bathing:

A bath** of fresh water gives moisture and coolness to the body, but that of salt water heats and dries it. A hot bath wastes and chills a person who uses it fasting, but warms and moistens after meals. A cold bath, on the contrary, warms a man who goes in fasting, but chills and dries after meals. Tepid bathing †† is beneficial in many distempers: It gives ease in pains of the side, breast,

* De morb. vulg. lib. 6. sect. 4. aph. 13, 18. pag. 1180.

† Ibid. aphor. 18.

‡ De aer. loc. et aq. pag. 284. lin. 15. et seq.

§ ἡ νιτρον.

|| De prae. medic. pag. 17. lin. 29.

** De vict. rat. lib. 2. pag. 361. lin. 46.

†† De rat. vict. in morb. acut. pag. 395. lin. 6. et seq.

and back, helps the breath, promotes spitting, and urine, relieves a weight in the head, and removes lassitude. But it requires nice management to sit up and use a bath properly. The passage to it should be short, and the steps in and out very easy. The patient should be composed and silent while in it, and should be washed and rubbed by the assistants. The misfortune is, few houses have the proper conveniencies for bathing, and where these are wanting, a bath does more harm than good. Bathing, in general, is improper for those who bleed at the nose, or are very weak or sick at the stomach; or too loose, or too costive, unless these last are previously purged.

Of COLD WATER for common drink.

I can ascribe no great virtues to cold water, says our Author*, but only that it is sometimes useful in acute distempers, for it neither † eases a cough, nor promotes expectoration in inflammations of the lungs, but causes an irksome weight and fluctuation in the stomach. Neither does it quench thirst, but rather increase it. It is found also, in some constitutions, to increase the bile, to impair the strength, and to distend the bowels. As it is cold and crude, it passes off slowly, and promotes neither stool nor urine. And even in fevers, if

* De rat. vict. in morb. acut. pag. 394. lin. 30. et seq.

† Hippocrates seems in this place to describe the effects of cold water upon distempered bodies only, "for there is no doubt that cold water is the best and most wholesome common drink in nature to strong healthy children, to vigorous youth, and to others of a good constitution who have been habituated to it, and with whom it has been generally found to agree."

you give it when the feet are cold, you do mischief. Nevertheless, in complaints of a great weight in the head, or when the understanding is disordered, we must either give water alone, or a small white wine, and some water after it; for by that mixture the wine will do less hurt to the head and understanding.

OF SLEEP and WAKEFULNESS.

EACH * of these carried beyond its proper bounds, is injurious to health. Excessive † watching prevents the aliment from being digested, and generates crude humours. But the contrary extreme of too much sleep relaxes the body, oppresses the head, and makes a man look as if he was parboiled.

NATURE ‡ directs us to accustom ourselves to wake § in the day and sleep in the night, and he who acts contrary to this order, will suffer for such folly.

THE body, when one is asleep, should always be well covered ¶ with cloaths; but the bed chamber should be large and airy.

WHEN a man's dreams at night correspond with the actions of the day, and represent only such things as are natural and proper to be done,

* Sect. 7. aph. 73. pag. 1261.

† De rat. vict. in acut. pag. 392. lin. 17.

‡ Galen observes upon this maxim, that in the time of Hippocrates custom did not differ from nature; "but now (says he) they rich invert the order of nature, and turn night into day." De san. tuend. lib. 6. cap. 5.

§ Prænot. pag. 39. lin. 40.

¶ De morb. vulg. lib. 6. sect. 4. aph. 14. cum interpretatione Galeni.

they denote a good state of health, and shew that there is neither plenitude which requires evacuation, nor emptiness which requires a supply, nor any other beginning distemper. But those dreams which are contrary to the actions of the day, denote a bodily disorder *, which is great or small, as those dreams depart more or less from a man's natural actions or habits. I advise therefore, that in such cases, the disorder may be removed, and distempers prevented. If, for instance, we dream of evacuations, it shews that the body is too full, and wants proper discharges by vomiting, abstinence, or exercise. On † the other hand, a man, who dreams that he eats common food with an appetite, is too empty, and requires nourishment. Frightful dreams also discover a *stoppage of the blood* ‡, and ought to be removed by proper means. And he who minds these rules will always enjoy good health.

OF REPLETION and EVACUATION.

To preserve § a good state of health, a man should void by stool every day, the dregs of what he has digested the day before.

THOSE ¶ who eat and drink little, and yet go through a great deal of fatigue, are commonly costive, and do not go to stool, sometimes, in three or four days; from which they are in danger of

* De insomn. pag. 376. lin. 13.

† Ibid. pag. 380. lin. 5.

‡ ἐπίστασι τῆ ἀμαρτος σφραγίσι.

§ De morb. pag. 511. lin. 23.

¶ Prædict. lib. 2. pag. 87.

falling into a fever, or a looseness. But those who feed plentifully, and also undergo much fatigue, have soft and figured stools in proportion to their food and exercise. And it is observable, that when several persons, who are all temperate and healthy, eat the same quantity, but differ in their exercise, those who labour the least have the greatest number of stools, and those who labour most have the fewest.

THE complaints which proceed from repletion * are cured by proper evacuations; and those which arise from too large evacuations, are removed by a gradual repletion.

It is best † for young people to have their bodies moderately open, and for old people to be somewhat bound.

THOSE ‡ who discharge much by urine have but few stools.

WHEN § it becomes necessary to cleanse the body, those who are thin and bear vomiting well, ought to take a puke; but those who are fleshy and hard to vomit should be purged downward. And it is in general to be observed, that a puke, where it agrees, is best in summer, and a purge in winter.

THOSE who are in a good state ¶ of health, are hurt by purging physick.

MODERATE ** commerce with the sex is off

* De natur. homin. pag. 228. lin. 17.

† Sect. 2. aph. 53. pag. 1246.

‡ Sect. 4. aph. 82. pag. 1252.

§ Sect. 4. aph. 4, 6, 7.

¶ Sect. 2. aphor. 35, 37.

** De impub. vulg. lib. 6. sect. 5. aph. 22, 26.

service to such as are loaded with phlegm. But commonly it binds the belly.

Of MOTION and REST.

THE complaints* which arise from immoderate labour are cured by rest; and those which proceed from sloth are removed by exercise.

If the whole body † should rest a great deal longer than usual, it will not become stronger for that rest; and the same observation holds good with respect to every member of the body. And if, on the other hand, after a long habit of idleness, a man enters directly upon hard labour, he will be sure to do himself hurt. The feet, by a long state of rest are disqualified for much walking, and the other limbs, by long inaction, lose in a great measure their use. And a soft bed is as irksome to a person unaccustomed to such ease, as a hard bed is to him who lies at home on down.

He ‡, who from constant fatigue falls into an inactive state, must live abstemiously, otherwise his body will be soon tortured with pain, and oppressed with a load of humours.

THOSE § who seldom use any motion, are wearied by the smallest exercise; but such as are accustomed to labour, can bear a great deal without fatigue.

* De natur. hom. p. 228. lin. 18.

† De vict. rat. in morb. acut. pag. 391. lin. 29.

‡ De vict. rat. in morb. acut. pag. 392. lin. 5.

§ Ibid. pag. 364. lin. 33.

FRICION *, or chafing, makes the body warm, firm, and fleshy.

READING † aloud, and singing, warm and dry the body: And of all exercises walking seems the most natural to men in good health.

UNIVERSALLY speaking, moderate ‡ exercise gives strength to the body, and vigour to the senses.

EXERCISE § is wholesomest and best before meals.

Of the **PASSIONS** and **AFFECTIONS** of the **MIND**.

VIOLENT ¶ anger contracts the heart and lungs, and fills the head with hot humours; but tranquillity of mind unbends the heart.

FEAR ** and grief, if they continue long, portend melancholy.

TERROUR ††, shame, joy, and anger have a great influence on the body, and determine it to actions correspondent to their respective natures; thus the sudden sight of a serpent will make the countenance pale; and to walk upon the edge of a pit will make the legs tremble.

CARE †† and meditation are the exercise of the mind.

† De vict. rat. in morb. acut. pag. 364. lin. 7.

* Ibid. pag. 363. lin. 5.

‡ Ibid. pag. 362. lin. 46.

§ De morb. vulg. lib. 6. sect. 4. aph. 28. pag. 1131.

¶ Ibid. sect. 5, aph. 8. pag. 1184.

** Ibid. sect. 6. aphor. 23. pag. 1257.

†† De humor. pag. 49. lin. 35.

‡‡ De morb. vulg. lib. 6. sect. 6. aphor. 10. pag. 1184.

Having thus given a detail of all that I could find in the writings of Hippocrates, relating to the six articles necessary to human life, I shall, in the next place, proceed to his other general rules with regard to the preservation of health.

The First General R U L E.

EVERY * excess is an enemy to nature. And this he confirms by another Aphorism †, which informs us, that in labour, meat, drink, sleep, and commerce with the sex, a just mediocrity and moderation should be observed: And by a third, which declares, that evacuations ‡, pursued to excess are dangerous, and plenitude carried to an extremity is equally pernicious.

The Second General R U L E.

IT is dangerous § to change suddenly a long habit which a person has contracted; or to run from one extreme into another. He says also in another || place, that people must have a particular regard to what they have been accustomed to in food, raiment, exercise, sleep, concubinage, and the passions of the mind. And he is so positive with respect to the truth of this rule, as to declare, that even a bad diet **, which has been long persisted in, whether by eating or drinking,

* Sect. 2. aphor. 51. pag. 1246.

† De morb. vulg. lib. 6. sect. 6. aph. 5. pag. 1190.

‡ Sect. 1. aph. 4. pag. 1243.

§ De rat. vict. in morb. acut. pag. 389 lin. 20.

|| De morb. vulg. lib. 6. sect. 8. aphor. 43. pag. 1201.

** De vict. rat. in morb. acut. pag. 388. lin. 20.

is less injurious to health, than a sudden transition to a better diet. This he also illustrates farther, by shewing that he who has been habituated to drink wine *, and comes of a sudden to water, will feel the inconveniencies of the change, from the weight and flatulency produced by the water; while on the other hand, a quick transition from water, or from wine and water, to wine alone, occasions thirst, palpitations, and disorders of the head.

The Third General R U L E.

THE great preservatives † of health, are *Temperance* and *Exercise*. Or, as he expresses himself more distinctly in another place, if an exact proportion ‡ could be adjusted between the quantity of aliment taken in to nourish every individual, and the measure of exercise sufficient to carry off that quantity, so that the one should not exceed, or fall short of the other; such adjustment would fix the true standard of health, and distempers might with certainty be avoided. For as *aliment* fills §, and *exercise* empties the body, the result of an exact equipoise between them must be, to leave the body in the same state they found it, that is, in perfect health. And tho' he allows that such a balance between diet and exercise cannot be precisely settled ¶, because ages, constitutions, and

* De rat. vict. in morb. acut. pag. 389. lin. 46.

† De morb. vulg. lib. 6. sect. 4. aph. 20. pag. 1180.

‡ De vict. rat. lib. 1. pag. 341. lin. 23.

§ De rat. vict. lib. 1. pag. 341. lin. 7.

¶ Ibid. lib. 3. pag. 366. lin. 5. et seq.

seasons differ widely, and require a different treatment, yet he thinks it possible to observe the smallest excess on either side, as soon as it happens, and to prevent it from going farther and increasing into a distemper; for most distempers, says he, do not seize people suddenly, but grow by * degrees. And he values † himself not a little on being the first who found out this *preventive care*, and wonders that none of the antients thought of it, since nothing could be more worthy of their attention.

I have discovered ‡ those symptoms, says he, by which every excess, either of food above exercise, or of exercise above food, may be known in its beginning, and prevented from breaking out into a distemper; which will prove nearly of the same benefit to mankind, as if a just æquilibrium between diet and exercise could be found out.

It is difficult to reduce the many symptoms enumerated by Hippocrates, in his third book of diet, belonging to this excess either of aliment or exercise to distinct classes; I shall endeavour, however, to do it with all the plainness and conciseness I can, consistently with the spirit and meaning of the author; and, to that effect, shall range them in the following order. First then, he treats of those symptoms which arise from the excess of food above exercise. And secondly, of those which arise from the excess of exercise above food. The former may be reduced to six assemblages or classes.

* Ibid. lib. 1. pag. 347. lin. 37.

† Ibid. lib. 3. pag. 369. lin. 1.

‡ De rat. vict. lib. 3. pag. 366. lin. 18.

First, Some feel a stuffing* and fulness in their nostrils, after supper, without any apparent cause, but cannot discharge any mucus, until they have used some exercise next morning; their eye-lids, in a little while, grow heavy, and, by degrees, they lose their appetite and colour; which is at last followed by a defluxion or fever, when any accident has put their load of humours in motion. These are marks of a gradual repletion, tho' people are ready to blame some particular inadvertency they were guilty of; which, however, could by no means, produce such complaints: But we must not wait until this repletion is accumulated; on the contrary, as soon as we have observed the first mentioned symptoms, we must diminish the quantity of our food, and increase our exercise, until all those marks of repletion are removed.

Secondly, Others †, when their diet bears too great a proportion to their exercise, not only sleep well in the night, but are likewise drowsy in the day; the repletion still increases, and their nights begin to grow restless; their sleep afterwards becomes disturbed with frightful dreams of battles. When this happens, there is danger lest the accumulated humours should fall upon some part and overwhelm it. But that danger must be prevented by subtracting from the aliment, and adding to the exercise.

* De rat. vict. lib. 3. pag. 369. lin. 10. et seq.

† De rat. vict. lib. 3. pag. 369. lin. 45.

A *third* sort * of complaints, arising from repletion, is a pain, or lassitude, sometimes in one part and sometimes in another, and sometimes all over the body. People think to relieve themselves from this lassitude by laziness and indulgence, until they increase their complaints into a fever, which should have been prevented by a contrary course of abstinence and exercise.

A *fourth* assemblage † of symptoms is indigestion and flatulence, which daily increasing, occasion a disturbance in the intestines; and the food is thrown out, at first, liquid and corrupted, without pain; but afterwards, the bowels being eroded by the acrimony of the humours, a discharge of blood or a dysentery succeeds, which is a dangerous distemper, and ought to have been prevented by taking less food, and using more exercise, when the flatulency and bad digestion began to grow troublesome.

Fifthly, Some ‡ from repletion are apt to grow pale, and to be troubled with acid eructations, but they may prevent danger by taking a vomit, and by using a smaller quantity of food, and more exercise for some days.

Lastly, Some § persons, from repletion, especially such as are gross, sweat profusely in their sleep, which gives them no great uneasiness in the beginning; tho', in process of time, it becomes the cause of pain and distempers. And it is ob-

* De vict. rat. lib. 3. pag. 370. lin. 9.

† Ibid. pag. 371. lin. 3. et seq.

‡ Ibid. lin. 45.

§ De rat. vict. lib. 3. pag. 372. lin. 17. et seq.

servable, that they are most apt to fall into this disorder, who, from a long habit of idleness, come, of a sudden, to use exercise. But those bad consequences may be prevented by a subtraction of food, and a gradual increase of exercise.

HAVING thus given a distinct view of the various kinds of complaints produced by an excess of food above exercise, he comes next to shew the inconveniencies which proceed from the contrary excess of exercise above food, and these may be reduced to three sorts.

First, Some from too much exercise *, in proportion to their diet, complain, after a little time, of a heat in their bellies, and then of pain; they loath their food also, and their bowels become ulcerated, which brings on a looseness very difficult to stop. But a prudent foresight will obviate these growing evils, by subtracting one half of the exercise, and by using a cool dry diet for some days, one third less than in a state of health; and then proceed gradually to take more sustenance, and use less exercise than before.

Secondly, Others †, from excess in exercise, are afflicted with an extreme coldness, a dryness and bitterness of the mouth, and, after a while, with a suppression of urine and stool. Whatever they eat or drink is then thrown up, and at last the fæces are vomited, which commonly terminates in death. But whenever one perceives a heat and dryness predominant, it will be easy,

* De rat. vict. lib. 3. pag. 373. lin. 40. et seq.

† De vict. rat. lib. 3. pag. 374. lin. 17. et seq.

by removing them, to prevent farther mischief, and that is done by warm bathing, quiet sleep, a cooling, moistening, and nourishing diet, gradually increased; and by withdrawing one half of the former exercise.

A third sort*, from a diminished proportion of food with respect to their labour, fall into shiverings after walking or any other exercise, so that sometimes their teeth chatter with cold; they afterwards grow drowsy, and when they awake, yawn and stretch; and are at last seized with a malignant fever. To prevent which, they must lessen their exercise one half, and use at first some cool, soft, food, and drink diluted wine, and rise by degrees to such a proportion of diet as will better support them under their labour.

AND here the good old man adds, that those whose labour † exceeds their sustenance, and who have impaired their strength by fatigue, may take a chearful glass once or twice, *but not to excess*.

SOME have pretended that Hippocrates, in this place, advises people to get drunk on certain occasions. Others have gone farther, and recommended the getting drunk once or twice every month as conducive to health; and have quoted Hippocrates to justify their intemperance. But such opinions have no sort of foundation in this passage. The word used by Hippocrates is *μικροθύται*, *to drink a chearful glass*, which, in this place, is precisely equivalent to the expression

* De vict. rat. lib. 3. pag. 375. lin. 10.

† Ibid. lin. 26. et. seq.

πρὸτα θερμαίνεσθαι, *to be warmed with wine*, frequently met with among the Greek writers. Plutarch, in his symposiacs, or *table conversations*, compares μέθυσιν to ἔρῳ, or *wine to love*, as each equally renders men warm, chearful, and unreserved. And hence, says he, it was commonly reported that Æschylus composed his tragedies when he was warmed with wine. I have cited his words * at the bottom of the page. He makes in the same place this observation of his grandfather Lamprias, that he disputed best, and unravelled the difficulties of philosophy with most success, when he was at supper, and well warmed with wine. *The cups went round with the debates*, says Dryden in his life of Plutarch, *and men were merry and wise together*. The same word μέθυσιν is used also in the gospel of St. John ii. 10. and from the circumstances there described is judiciously translated, *when men have well drunk, or have drunk to be chearful*. The meaning of Hippocrates is precisely the same in this precept, which is evident from the restriction annexed, πλὴν ἄλλὰ μὴ εἰς ὀπερσομένην, *sed non supra modum*.

LET not therefore the patrons of drunkenness screen themselves under the authority of Hippocrates, who was a man of the greatest temperance and probity, and whose precept is supported by the observation of Homer that lived three hundred years before him, and says,

Ἄνδρες

* Ἐλέχθη δὲ καὶ ὅτι τῶν μεθύσων τὸ ἔρῳ ἕκειν ἐστίν. Ποῦτι γὰρ θερμοῦς καὶ ἰλαροῦς καὶ εὐαρεστημένος. — Καὶ τὸν Αἰσχύλῳ φασὶ τὰς τραγῳδίας κούστα ποιῆσαι καὶ διαθερμαίνόμενον. Plutarch Sympos. lib. 1. quæst. 5.

* Ἀνδρῶν δὲ κερμαῖωνται μένος μετὰ οἴνου αἰθέρι *.

The weary find new strength in generous wine.

POPE.

C H A P. VII.

Of Polybus, Diocles Carystius, Cornelius Celsus, and Plutarch, concerning health.

OF POLYBUS.

WE have, among the works † ascribed commonly to Hippocrates, a short tract, concerning wholesome diet, which Galen, in his commentary upon it, supposes to have been written by Polybus the disciple and son-in-law of Hippocrates.

THIS Polybus, after the death of his master, taught † his school with great reputation. He lived about 410 years before Christ.

IN this tract the author advises those, who are in circumstances to live as they please, to eat heartily, in winter, of bread and roasted flesh, but to drink sparingly; and let their wine be unmixt and good, in order to keep themselves warm, and free from a load of bad humours in that cold and damp season.

IN summer, for contrary reasons, he recommends a cool diet, consisting chiefly of vegetables and boiled meat, and orders people to drink plentifully of small diluting liquors.

* Iliad, lib. 6. lin. 262. edit. Claugensf.

† De salub. vict. rat. pag. 337. lin. 1. et seq.

‡ See Le Clerc's hist. de la med. part. 1. liv. 4. chap. 1.

In spring and autumn he directs a middle regimen between those two extremes, approaching in the spring, as the weather grows milder, to the cool diet of summer, and receding from it gradually in autumn, not only toward the warm aliment, but also toward the warm cloathing* of winter.

A regard must also be had to different ages and temperaments; the young, the dry, thin, and black, requiring a cool moist diet; and old people a warm moist diet throughout the whole year; whereas persons of a gross relaxed habit of body; the flabby, and redhaired, ought always to use a drying diet.

SUCH as are fat †, and desire to be lean, should use exercise fasting; should drink small liquors a little warm; should eat only once in a day, and no more than will just satisfy their hunger; and should lie on hard beds: Whereas those that are lean, and want to be plump, should pursue a contrary course.

OF DIOCLES CARYSTIUS.

THE next who has touched upon this subject of the preservation of health, was Diocles of Carystos in Eubœa, an island of the Archipelago near the coast of Greece. He was a physician of great merit, and had the honour of being called

|| De salubr. vict. rat. pag. 338. lin. 13. - See on this place the notes of Galen, who thinks that by *vestes parvas*, the author may mean warm cloathing, tho' he does not approve of the phrase.

* De salub. vict. rat. pag. 338. lin. 14. et seq.

the second Hippocrates. We have still his letter* to Antigonus, one of the successors of Alexander the great, which shews the time in which he lived.

IN this letter he tells the king, (whom he compliments with the titles of musician, mathematician and philosopher) that as no tempest arises in the heavens without previous signs, which sailors, and other skilful persons know, so no distemper attacks the human body without first giving notice of its approach. He divides the body into four principal parts, the *head*, the *breast*, the *belly* and the *bladder*.

THE previous symptoms of bad distempers, likely to fall upon the *head*, are giddiness, pain, and a weight over the eye-brows, ringing in the ears, pulsation of the temples, dimness and swelling of the eyes in a morning, loss of smell, or turgid gums. When any such symptom therefore is felt, it should be removed by keeping the head warm, and purging it with mustard boiled in honey and water, or a gargle of a decoction of hyssop and raisins. But if those previous signs are neglected, inflammations of the brain, quinseys, or some other dangerous distemper may ensue.

DISTEMPERS of the *breast* are foreboded by sweating, chiefly over the thorax; a foul tongue; a salt or bitter taste in the mouth; pain under the ribs or shoulder blades; anxiety after sleep; coldness of the breast and arms; and a tremor of the

* This letter is commonly printed with Paul Ægin. lib. i. cap. 100.

hands. But these previous symptoms must be removed by gentle vomits, to prevent pleurifies and peripneumonies, which otherwise may follow.

DISTEMPERS of the *belly* are threatened to those who complain of gripings; bitter eructations; stiffness of the loins; flying pains all over the body without any apparent cause; numbness of the legs; or slight fevers. When one or more of these symptoms become troublesome, your diet should be such as you know by experience to be opening, otherwise a dysentery, hæmorrhoids, or gout may soon succeed.

LASTLY, The forerunners of bad distempers about the *bladder* are a sense of fulness when you have eat but little; flatulency; dark coloured urine voided with difficulty; or a swelling about the lower parts of the belly. When any of these symptoms appear, you ought to make use of mild diuretics, such as the roots of fennel and celery infused in white wine, of which you should drink a glass or two every morning, upon an empty stomach, mingled with some small diuretic water. But if you neglect this precaution, a dropsy, stone, or strangury may be the consequence.

OF CORNELIUS CELSUS.

THO' many celebrated physicians flourished in the space of three hundred years which intervened between Diocles, who lived under Alexander the great, and Celsus, who lived under Tiberius, yet it has unfortunately happened, that only

a few shreds of their works have come down to us; and in these there is nothing of moment relating to our subject.

CELSUS is much more methodical in his arrangement of those rules which he lays down for the preservation of health than Hippocrates; tho' he prudently borrows many of them from that great man. He observes the following perspicuous order.

First, He instructs strong hearty people how to preserve that good state of health which they enjoy.

Secondly, He admonishes the infirm and valetudinary to rectify the natural or acquired defects of their constitution.

And *thirdly*, He gives particular directions, accommodated to particular incidents, ages, seasons of the year, and infirmities. But in this abstract I shall not trouble the reader with such of his precepts as are now exploded, and of small importance; or have been mentioned already; or are calculated rather to cure some transient maladies, than to preserve health.

RULES for the Healthy and Robust.

A man who is sound and strong, should tie himself down to no particular rule of diet, nor imagine that he stands in need of a physician; he ought frequently to diversify his manner of living; to be sometimes in town, sometimes in the country; he should refuse no manner of food that

's commonly used; should, at different times, hunt, sail, sit still, but oftener use exercise; should sometimes indulge himself at feasts, and sometimes avoid them; sometimes eat and drink * more than is proper, and sometimes not exceed; should rather make two meals than one in a day, and always eat a great deal †, provided he is able to digest it.

COMMERCE with the fair sex is neither too

* Great disputes have arisen concerning this rule of Celsus, his words are, "modo plus iusto, modo non amplius assumere." Some approve of the full latitude he gives, others highly blame it. Verulam thinks that excess in eating and drinking should now and then be indulged: "Epule profusæ et propotationes non omnino inhibendæ sunt." *Hist. vit. et mort.* pag. 341. Melchior Sebizius on the other hand, affirms, that by this advice Celsus gives all scope to intemperance, and sets himself up for a patron of gluttons and drunkards: "Quibus verbis comedonum, bibonum, helleonum, patronum agere videtur; et latam quod aiunt, fenestram, alicui et confusioni aperire: nam si quod dicit verum est, videntur fasces regulæ Hygieinæ inverti, quæ opportunum tempus, decentem quantitatem, et debitam qualitatem requirunt. Natura enim ordinem requirit, suntque motus illius definiti, et ordinati." *De aliment. facult.* lib. 5. probl. 72.

And Sanctorius says, that it is not safe for all healthy persons to observe this rule: "Celsi sententia non est omnibus tuta." *Sect.* 3. 47. 42.

The truth is, a healthy man should not bind himself down to an over strict and abstemious diet, as Hippocrates has observed; nor to a regular uniformity in his way of living, because, in case any necessity should oblige him (which frequently happens) to alter the habit he has contracted, a quick transition to a new method might prove dangerous. It is the wisest course therefore for persons in health to vary their way of living often, that so, no new change may happen which can hurt them. This diversity, nevertheless, ought to be kept within the bounds of temperance; and Celsus gives too great a latitude, which seems to encourage excess, directly contrary to the first general rule of Hippocrates.

† This rule is liable to be mistaken, for a man should never overload his stomach, but ought to rise from meals with some appetite.

wantonly

wantonly to be indulged, nor too timorously to be shunned. When moderate, it renders the body lively, but too frequently used, wastes and enervates. This frequency, nevertheless, is to be estimated by a man's age and strength, for that commerce is harmless which is not succeeded by pain or low spirits.

HE concludes his directions to the sound and robust, with this admirable precept, *viz.* "Be *
" careful in time of health not to destroy, by ex-
" cesses of any kind, that vigour of constitution
" which should support you under sickness.

R U L E S for the Delicate and Infirm.

PEOPLE of tender constitutions (among whom may be reckoned the greatest part of our citizens, and almost all men of letters) must be regular in their way of living, and correct, by care, those disorders which arise from a weak frame of body, from a bad air, or much study.

A tender person should dwell in a well lighted, cheerful house, which is airy in summer, and enjoys the sun in winter; and should avoid mid-day heats, morning and evening colds, and damps of all kinds. Let the bookish and contemplative man take care not to study too soon after meals. And let even the man of business and the statesman spare a few hours for the purpose of health, and be sure to use some convenient exercise every day

* Cavendum ne in secunda valetudine adversæ præsidia confiteatur. Lib. 1. cap. 1.

before meals, such as reading aloud, walking, or playing at * ball of some sort, which exercise he should persist in, until he finds himself either in a gentle sweat, or a little tired, but no longer.

LARGE † meals are ever hurtful to a tender constitution. Confections and delicacies are bad on two accounts, first, because they tempt people to

* The Greeks played with four sorts of balls, the *little ball*; the *great ball*; the *σφαῖρα κένη*, or *empty ball*; i. e. blown up with air like our foot ball; and the *κάρπυρον*, which was a *huge leather ball*, hung from the ceiling, and stuffed with bran or sand, as those who tossed it were robust or delicate.

The Romans had also four sorts, first the *fillis*, which was a pretty large sort of hand ball, made of skin blown up with air, in which, according to Suetonius, Augustus Cæsar took great delight; and was, as we learn from Martial, a proper exercise for young and old.

Folle decet pueros ludere, folle senes.

Lib. 14. epigr. 43.

2. The *trigenalis*, of which Celsus says that it exercises the upper parts of the body, and which the learned Mercurialis conjectures to have been nearly the same with *tennis*: "eo prope modo quo nostrates supra funiculum ludunt."

3. The *paganica*, or common village ball, made of leather stuffed with feathers, larger than the *trigenalis*, and harder than the *fillis*.

4. The *karpastum*, which was a small ball tossed, rebounded, and caught from the ground, not unlike, it should seem, to the play at *foes* in England. Mer. de re gym. lib. 2. cap. 5.

All I shall remark upon the whole, is, that the high encomium justly bestowed by Galen upon the play at *little ball*, as the best of all exercises, to preserve health, is equally applicable to *tennis*, and to the play called *golf* in Scotland, and that it is pity such manly and healthful exercises should be so much disused.

Golf is a safe and moderate exercise, performed on a bare smooth common, by driving two small hard balls with proper *bats*, always forward to very distant holes in the ground, about a foot deep, and nine inches over; and the party whose ball is driven into the hole with the fewest blows, (which are carefully numbered on both sides) obtains the victory.

† Ubi ad cibum ventum est, nunquam utilis est nimia satietas.

eat

eat more than enough ; and secondly, because they are hard of digestion.

OF UNEXPECTED INCIDENTS.

If a man must necessarily remove his habitation into a worse air, he had best do it in the beginning of winter.

It is imprudent to contract a habit of idleness at any time, because a man may chance to be under a necessity to work.

To a person sweating with labour, there is nothing more pernicious than to drink cold water ; nor is it proper for such as are wearied with a journey, tho' their sweat be gone off.

FATIGUE is often eased by change of labour, and he who is tired with any unusual sort of work, is refreshed by that to which he has been accustomed.

THOSE who are much fatigued should, if possible, sleep in their own * beds, for a strange bed does not refresh them near so much.

OF CONSTITUTIONS and AGES.

It is expedient, before all things, to understand a man's particular nature and habit of body. Some are too meagre, others too fat ; some hot, others cold ; some moist, others dry ; some too costive, others too lax. Now, all those extremes should be rectified as much as possible, and every

* This is generally true, but not universally.

constitutional complaint, which endangers health, gently and gradually removed.

THE meagre * should be plumped up by very gentle exercise, and long intervals of rest, a soft bed, long sleep, tranquillity of mind, fat † meat, frequent meals and as plentiful as he can well digest, and by keeping the belly gently bound.

FAT persons should be made thinner by warm bathing ‡, strong exercise, hard beds, little sleep, proper evacuations, acids, and one meal in a day.

HOT constitutions are cooled by drinking water, and acid liquors. And the cold are warmed by the use of the flesh brush, by salt meat, and good wine.

THE dry are rendered moist by less exercise, and a fuller diet, especially by drinking more than

* " I reduced a huge fat fellow to a moderate size in a short time, (says Galen) by making him run every morning, until he fell into a profuse sweat; I then had him rubbed hard, and put into a warm bath; after which I ordered him a small breakfast and sent him to the warm bath a second time. Some hours after, I permitted him to eat freely of food, which afforded but little nourishment; and lastly, set him to some work which he was accustomed to, for the remaining part of the day.

" On the other hand, a man that is too lean, may be made plump, 1. By such food as will produce sweet juices and good nourishment. 2. By gentle exercise, which gives a firmness to that nourishment. And 3. By avoiding heat, fatigue, and every violence that can dissipate the nourishment he has received." Galen de sanit. tuend. lib. 6. cap. 8.

† Fat meat, if a man can digest it well, will help to pump him up, otherwise it will do him no service.

‡ For a short and clear account of the magnificence, variety, use, and abuse of baths among the antients. See Mercurial. de re gymnast. lib. 1. cap. 10. and Petri Dunetii dictionar. antiq. Rom. et Græc. sub. voce Balneæ. And among the moderns, especially on cold bathing, see doctors Baynard, Floyer, Wainwright, and Lucas.

usual;

usual; by cold bathing, and by resting sometime after their morning exercise before they eat.

THE lax are made firmer by increasing the usual exercise; by making but one meal in a day instead of the two they made before; by drinking little, and deferring that until they have done eating; and by sitting still for some time after meals.

THE costive, on the contrary, are relaxed by increasing the quantity of food, by drinking large draughts at meals, and by using exercise soon after eating.

OLD people have greater reason to be cautious not to trespass upon the rules of health, than young persons, who have more strength.

Of the SEASONS of the Year.

IN Summer it is best to make smaller meals than in winter, but more frequent.—The cold bath is also proper at that season.

IN autumn, when the days begin to grow cold, we should be careful not to go abroad in too light cloaths, or too thin shoes.

Of the habitual INFIRMITIES of different Parts of the Body.

THOSE whose heads are infirm, should pour cold water upon them every morning; should eat moderately of food easy to digest; should make wine and water their common drink; that, in case

case the head, at any time, grows worse than usual, they may have recourse to, and relief from water alone.

NOR will a weak head bear writing, reading, vehement speaking, or intense thinking at any time, but especially soon after meals.

COLD water is also good to wash blear eyes, and to gargle fore throats.

THOSE who are subject to an habitual looseness should play at tennis, and accustom themselves to such sorts of exercise as shake the trunk of the body. They should also avoid a variety of dishes at one meal, and should deal very little in broths, greens, or small sweet wines; and should sit quiet for a considerable time after meals.

PEOPLE subject to colics, should forbear to eat or drink any thing cold; and whatever they know by experience to be flatulent.

THE symptoms of a weak stomach are paleness, meagerness, loathing, frequent vomiting, and a head-ach, sometimes when the stomach is empty: And such persons should always eat things of easy digestion, and drink the rougher sorts of wine, if they can bear them, cold; and use also such exercise as shakes the trunk of the body.

THOSE who are afflicted with the gout in their feet or hands, ought, between the fits, to give all the exercise they can bear, to the parts affected, in order to render them firm and hardy; but in the fits rest is necessary. Concubinage is a great enemy to gouty complaints.

UNDER every constitutional infirmity it is proper to promote a good digestion; but to gouty people it is indispensably necessary.

P L U T A R C H.

PLUTARCH flourished in the time of Trajan, and, tho' himself no physician, has composed an elegant dialogue on the preservation of health; and has given us several useful observations upon that subject.

HE thinks it unbecoming a philosopher, who is at great pains to make himself master of music and geometry, to be at the same time, totally ignorant of what belongs to his own body.

AT some of the high festivals in Athens, says he, besides the entertainment exhibited to the public, there was also money distributed among the spectators, which made the pleasure double. In like manner, physick *, which is quite as elegant, copious, and delightful as any of the liberal arts, has this advantage above them all, that it bestows good health on those who understand it, and will be directed by its precepts.

IT is an observation of some importance to health, (tho' now and then disregarded by physicians) that a coldness, in the extreme parts of

* Plutarch happily reaped the benefit of his regard and application to this science; for we are told by Dryden, in his life of this philosopher, that "it was his prudence so to manage his health by moderation of diet and bodily exercise, as to preserve his parts without decay, to a great old age; to be lively and vigorous to the last; and to preserve himself to his own enjoyments, and to the profit of mankind."

the body, which drives the natural heat inwards, shews a tendency to a feverish disposition; and that we ought therefore to guard our limbs * well from cold at such times, as we use no motion to throw the heat outwards.

ANOTHER observation is, that persons in health ought sometimes to taste that simple and insipid food, which alone is proper in time of sickness; that so they may not be disgusted at the sight of it, nor, like froward children, set themselves against it, when it becomes necessary: And for the same reason we ought to drink water sometimes, tho' we have wine at hand; because in some illnesses it will be proper to drink water only. In short, we should discipline our minds so as to make them value that alone which is proper and conducive to health; and not think ourselves undone when a simple or coarse meal is set before us. It was wisely said by one of the antients; "chuse that manner of living which is most reasonable, and custom will reconcile you to it."

A third observation is, that thin people are generally the most healthy; we should not therefore indulge our appetites with delicacies or high living, (tho' we had it in our power) for fear of

* If this observation of Plutarch was found useful in Greece and Italy, how much more in our colder climate. And I will venture to affirm, that persons whose legs and feet are for the most part cold, cannot enjoy a good state of health. And I will say farther, that woollen under stockings, worn by people of tender constitutions, to keep up, by their warmth, an equable circulation in the extreme parts, would prevent many a fit of pain, sickness, and low spirits, which they must feel without such a precaution.

growing corpulent *. We may be sometimes invited to the entertainments of great men, where custom obliges us to do as others do; and where it is hardly possible to avoid excess: Let us therefore be prepared for such incidents, by having our bodies pure and healthy, lest we should add load to load, or fuel to the fire; but even at such entertainments, if we should be pressed to drink unreasonably, we must refuse to comply, tho' our refusal should give offence; and say with Creon:

Better to forfeit your esteem to day,
Than grieve you with my groans, or death to-morrow.

It was the advice of Socrates, "that we should beware of such food as may tempt us to eat when we are not hungry, and of such liquors as may intice us to drink when we are not thirsty." Such, it is true, may be used when they become necessary to our nourishment, or health; but we must take great care never to let those delicacies prevail with us to overcharge our stomach: The folly of those is very great, who out of mere vanity load themselves with dainties at great men's tables, that they may boast, among their friends, of those high priced rarities with which they were feasted; whereas it would be much more to their honour, if they could say that they had such a command of themselves as to abstain from them.

* Corpulency is not always the consequence of high living, for in some constitutions it excites feverish disorders, and various other complaints.

AMONG all the destructive follies of voluptuousness, there is none more ridiculously extravagant than that of those who pay high prices to celebrated whores, a Phryne or a Lais, while they neglect their wives at home, who have many more valuable charms than these mercenary wretches. How discreetly does the poet Menander introduce a pimp, leading in a train of beautiful prostitutes, to ensnare a company of well disciplined young men; "at whose approach the youths hung down their heads, eating the repast which was set before them, nor would any of them once look up at these bewitching destroyers."

THOSE who have a true taste for pleasure, should, for the sake of that pleasure, live temperately; because, without temperance, there can be no health, and without health we can relish no enjoyment. What avail the greatest delicacies to a sick stomach? Is not a good appetite the most exquisite sauce? It is reported of Alexander the great, when, upon a march, he turned away his cooks, that he should say, "he carried much better cooks along with him than those he turned off, *viz.* a long morning's journey to whet his appetite to his dinner, and a frugal dinner to make his supper relish well."

I am sensible, continues our author, that great fatigue, heat, and cold, sometimes raise fevers; but we may also observe that those external causes rarely bring distempers upon such as are temperate, and free from any redundancy of humours. It is this redundancy that throws the body into stubborn

bern diseases, just as stinking mud, agitated by external causes, taints the air, and every thing that comes near it. Hippocrates says "that a spontaneous weight and lassitude of the limbs forebode a distemper approaching." And whence proceeds this weight, but from a plenitude which compresses the nerves? Unreasonable, therefore, is the practice of them who think to remove this sort of weariness, by eating and drinking plentifully, whereas abstinence and exercise are the true cure of it.

THO' I cry down voluptuousness, as a destroyer of true pleasure, yet I do not recommend an over scrupulous and rigid abstinence, which exposes the body to many dangers, sinks the spirits, and disqualifies us for labour or pleasure, by making us timorous, and perpetually suspicious of some bad design against us; and never permits us to perform any action with true courage or magnanimity. We must keep a medium between these two extremes, and like skilful mariners, neither shorten our sails too much in fair weather, nor spread them too wide in a storm.

AND as we must observe a moderation in diet, exercise and pleasure, so likewise our sleep must neither be too long nor too short; and even our dreams should be natural and easy; for when we find them absurd and frightful, we have reason to suspect a fulness, or some bad disposition of the humours of our body. In the same manner when any sudden causeless fear, or grief, or fretfulness

seizes

seizes us, it is more than probable that some malignant vapour from our distempered bodies mingles with our spirits and disorders them.

It would be of great moment towards the preservation of our health, if when we visit our friends under any illness, we should, without an air of curiosity, or affectation of physical learning, kindly inquire what had done them hurt, whether fatigue, abstinence, or any surfeit, had occasioned their illness; that so we ourselves may learn the necessity of temperance from the experience of others, and take care to avoid those excesses which were the cause of their misfortunes.

THREE things, says Plutarch, appear to me to be chiefly conducive to health, *viz.* exercise, temperance, and a thorough acquaintance with one's own constitution *.

As to the exercise of men of letters (whom he seems principally to regard) it is surprizing to think what benefit they receive from reading aloud every day; we ought therefore to make that exercise familiar to us. What riding in an easy chariot is, compared with other exercises, the same is reading aloud, compared with dialogue or conversation. The voice moves gently upon the thoughts of another, and glides smoothly along without that vehemence which generally attends disputations. But tho' reading aloud is a very healthful exercise, violent vociferation may prove pernicious, as it

* Tho' Plutarch borrows these rules from Hippocrates, yet as he recommends each of them in a very entertaining manner, what he says may become more useful by being better remembered.

has been frequently the cause of bursting some blood vessel.

SOCRATES did not dislike dancing when it was only for health, but said "it was so far inconvenient as it took up too much room, whereas to a man who used the exercise of singing, or reading aloud, a chamber large enough to sit in, was sufficient." It is carefully to be observed, that this exercise of reading aloud, or any other, must not be used immediately after repletion or fatigue, for such an error has proved hurtful to many. Idleness and sloth have always been looked upon as a plentiful source of distempers, and the man who thinks to procure himself health by indolence, is like him who, by continuing always silent, hopes to mend his voice. Besides, the very end and aim of health, which is action, is destroyed by sloth; what is his health good for, who never does any thing to help himself or his friends?

SOME have recommended walking after supper; others, imagining that motion disturbed digestion, thought rest preferable. The rational views of both may be obtained, by giving rest indeed to our bodies, but by entertaining our minds with cheerful conversation, which will neither fatigue the spirits through close attention, nor occasion inconveniencies of any kind; such as those agreeable and amusing questions in natural philosophy, history, or poetry, which some call the *desert* at the entertainments of men of letters. And thus we shall conform ourselves to the advice of the physicians, who desire that some space

of time may intervene between supper and bed, to prevent crudities.

THE second thing highly conducive to health is temperance in eating and drinking, and in all other gratifications of our senses. For my part, I think it were better to accustom ourselves, from our youth, to such temperance, as not to require any flesh meat at all: Does not the earth yield abundance, not only for nourishment, but for luxury? Some of which may be eat as nature has produced them, and some dressed and made palatable a thousand ways. But since custom has made it almost natural to us now to eat flesh, we may eat it indeed, but moderately, and not gorge ourselves with it like lions and wolves.

THE most noble of all liquors is wine; the most useful drink; the most palatable medicine; and, of all delicacies, the most grateful to the stomach. But if we should happen to be scorched by heat; fatigued with business; exhausted with intense thinking; or seized with any feverish disorder; a glass of warm water only, or mixed with but little wine, will refresh us more than wine alone, which having a natural activity and heat, is apt to exasperate our disorder, whereas it is our business to mitigate such complaints, by the softness and coolness of the water.

THE third thing necessary to health, is to be so well acquainted with our own constitution as to know perfectly what agrees or disagrees with us. It is reported of the emperor Tiberius, that he said "it was shameful for any man past three-

“score, to reach his hand to a physician to feel his pulse.” This was a peevish expression, but still I think it reasonable, that a man should have some knowledge of his own pulse, because there is such a variety in pulses; and should be acquainted with his own temper of body, with respect to heat or cold; and should observe from experience what agrees with him, and what does not; for that soul, in my opinion, must be careless which has dwelt so long in a body, and yet is obliged to ask a physician, whether that body is healthiest in summer or in winter? Whether moist or dry food is best for it? And whether the pulsation in the wrist be quick or slow? People have learned to give directions to their cooks how they should prepare their food, but do not trouble themselves to know whether that food be wholesome or not; and provided their taste be gratified, health is quite out of the question. These are not the dictates of reason, especially when we consider the importance of health; and that this acquaintance with our own constitution is easily acquired by a little attention and care.

THREE errors which are very common among men I heartily wish reformed: One is that of taking strong purges or vomits to carry off the redundancy of their shameful intemperance, and the complaints which it brings upon them. He who takes a rough purge to relieve his body from too great a load of food or humours, behaves himself like an inhabitant of Athens, who, finding the

multi-

multitude of citizens troublesome to him, should contrive to drive them out, by filling the city with Scythians and wild Arabs. Instead of these violent drugs therefore, which corrupt the body, he should, without any preparation, directly puke up his load; or live abstemiously for a few days.

ANOTHER error is committed when people bind themselves down to certain stated rules of abstinence, or think it expedient to fast on certain periodical days; imagining, without reason, that such a formal restraint will contribute to their health. These punish themselves, without any necessity, by adhering to useless rules, which make their whole lives uncomfortable. A man under such bondage lives altogether for himself, and rather resembles a shell fish, which remains fixt to its rock, than a rational creature who has any commerce with the world, or would be useful to mankind.

A third error which studious men are apt to fall into, is not less dangerous; they read and meditate incessantly, without allowing proper relaxation or refreshment to the body; and think that a frail machine can bear fatigue, as well as an immortal spirit. This puts me in mind of what happened to the camel in the fable, which refusing, tho' often premonished, to ease the ox, in due time, of a part of his load, was forced at last to carry, not only the ox's whole load, but the ox himself also, when he died under his burthen. Thus it

happens to the mind which has no compassion on the body, and will not listen to its complaints, nor give it any rest until some bad distemper compels the mind to lay study and contemplation aside; and to lie down, with the afflicted body, upon the bed of languishing and pain. Most reasonably, therefore, does Plato admonish us to take the same care of our bodies as of our minds; that like a well matched pair of horses to a chariot, each may draw his equal share of weight. And when the mind is most busy in the contemplation of virtue, the body should then be cherished with the greatest care, that so it may give no obstruction in such a noble pursuit.

OF AGATHINUS.

AGATHINUS was contemporary with Plutarch: He practised physick at Rome, and is mentioned in several places by Galen *. We have his thoughts concerning the cold bath among the collections of Oribasius †; and as this author is full and clear with regard to the practical part of cold bathing, which when used with the necessary precautions, may be very subservient to the preservation of health, it will be proper to know the sentiments of this ancient physician upon so interesting a subject; especially as his directions will supersede the trouble of consulting others upon the same article.

* In lib. 1. Hipp. de morb. vulg. comment. 2. sect. 25. Etæ different. puls. lib. 4. cap. 10. et 11.

† Medicin. collect. lib. 10. cap. 7.

“ THOSE who desire to pass through this
 “ transitory life with health, (says he) should
 “ bathe themselves frequently in cold water. I
 “ can scarce find words to express the benefit
 “ which people receive from this practice; and
 “ even in extreme old age, cold bathing, to such
 “ as have been habituated to it, will render the
 “ body firm, and the countenance lively; will
 “ strengthen the appetite, assist concoction, pre-
 “ serve the senses intire; and, in a word, will
 “ give vigour to the whole animal oeconomy.”

I have been told, continues our author, that it is a common custom among the barbarous nations, to dip their infants daily in cold water; but we parboil our children with warm ablutions, persuaded thereto by our nurses, because, forsooth, the infants go to sleep soon after the fatigue of being washed in warm water, and rest pretty well in the night; but the consequence is, that children, sodden in this manner, frequently fall into convulsions and epilepsies, very difficult to be removed.

Our aliment should be thoroughly digested and distributed, or, in other words, the stomach should be empty, and the body light when we go into the cold bath. We should also walk a while, or use some other gentle exercise, to give us a moderate warmth and alacrity of spirit, immediately before we enter: but we must by no means heat or fatigue ourselves at that time. The ears should be closely stopped to prevent the cold water from getting into them. When we are ready, we ought to plunge instantly in the water, or

have it poured upon us, but the former is best. Such as have strength and resolution to bear it, may dip their whole bodies over-head a second or third time under water; but whether they dip once or oftner, they should be always exceedingly well dried and rubbed when they come out. The water should neither be of an icy coldness, nor of too remis a degree, but ought to be always pure and bright. Sea water is best, especially for the first trials.

SOME think that those who are not accustomed to the use of the cold bath, ought not to begin it before the middle of summer; "but I have seen
" many begin with great safety at all times of
" the year; it is nevertheless my own opinion,
" says our author, that the spring is preferable
" to any other season for the commencement of
" this practice."

C H A P. VIII.

Of Galen.—And such of his rules as were but slightly touched upon before his time.

CLAUDIUS GALENUS was born at Pergamus a city in the lesser Asia, about the year of our Lord 131. He wrote six books concerning the preservation of health, and several other tracts about the qualities and nature of ailments, and the difference of temperaments; from all which I shall extract the most material rules, that have not been recommended by others before

fore him, without entering into his scholastic disputes, or unnecessary digressions too frequent in his writings. But let not the fashionable pedantry of the times in which he lived, give us a mean opinion of this great man, whose penetrating genius, extensive knowledge, and just conceptions both of the works, and author * of nature, have been the admiration of ages.

He advises his readers, for their own sake, to persist with spirit and resolution in learning and practising those rules which conduce to the preservation of health, assuring them, for their encouragement, that by so doing they may preserve their bodies to extreme old age, free from all sorts of distempers. “ I was born (continues he) with
 “ an infirm constitution, and afflicted in my youth,
 “ with many and severe illnesses; but since I
 “ arrived to the twenty eighth year of my age,
 “ and knew that there were sure rules for pre-
 “ serving health, I have observed them so carefully,
 “ that I have laboured under no distemper since
 “ that time, except now and then a fever † for
 “ one day, which my fatigue, in attending the
 “ sick, necessarily brought upon me. A man,
 “ whose body is clear from every noxious humour
 “ that can hurt it, is in no danger of contract-

* *Usum partium demonstrando, “ ego conditoris nostri verum
 “ hymnum compono. Hoc autem omne invenisse, quo pacto om-
 “ nia potissimum adornarentur, summæ sapientiæ est: effecisse au-
 “ tem omnino quæ voluit, virtutis est invictæ ac insuperabilis.
 “ Quodque nihil suis beneficiis privatum esse voluerit, eo perfectis-
 “ simæ bonitatis specimen esse statuo.” De usu part lib. 3. cap 10.
 claf. 1. version vulg.*

† De san. tuend. lib. 5. cap. 1.

“ing any illness, except from external violence,
 “or infection. And why may not proper care
 “be taken to keep the body clear from all such
 “noxious humours?”

IN order to adapt his rules to persons under all circumstances, Galen divides mankind into three general classes. In the first he reckons those who are naturally sound and strong, and at liberty, from their affluence, to bestow what time and care they please on their health. In the second, he places such as are of a delicate and infirm constitution. And his third class contains those whose necessary occupations, in public, or private life, will not permit them to eat, sleep, or use exercise at regular hours.

As to the first, he says, that to preserve life and health, as long as is consistent with the lot of man, it is necessary that the original stamina should be good, for some are so crazy, “that Æsculapius * himself could scarce prolong their lives to three-
 “score.” This class he divides into four periods, viz. Infancy, youth, manhood, and old age. Two of these periods, namely, infancy, and old age, had been touched upon but slightly before his time. But as to youth and manhood (whether of robust or tender constitutions) the general rules established by Hippocrates and others for preserving health, are, for the most part, the same which Galen also

* Sunt enim, qui ab ipso ortu adeo improspere corporis sunt nato, ut ne, si Æsculapium quidem ipsum iis præfeceris, vel Iesegulum annum videant. De san. tuend. lib. 1. cap. 12. Thom. Linastro Anglo interprete.

recommends, and therefore need not be repeated here.

To be brief; there are four articles, with regard to the preservation of health, which Galen has considered more attentively than any that went before him, *viz.* 1. Infancy. 2. Old age. 3. The difference of temperaments. And 4. The care necessary to be taken by those whose time is not in their own power. I shall therefore endeavour to give a clear succinct view of his precepts concerning these articles, in the order here set down.

ARTICLE I. OF INFANCY.

CHILDREN newly born should, if possible, be fed with their mothers milk, which is much more natural to them than that of a stranger. The nurses should give them a good deal of exercise, both in the cradle and in their arms, and should be extremely diligent to find out what makes the infants uneasy when they cry, and, by their unusual agitation, appear to be in pain, lest these agonies should throw them into fits, or into a fever. “ I attended a child (says our Author) who cried incessantly; whom neither motion, music, nor the breasts, could pacify for one moment; and, upon strict search, found, that the bed in which he lay, his cloaths, and body were all nasty, but the instant he was washed, and clean dressed, he fell into a sweet sleep, which continued several hours.” Infants ought to be fed with milk only until they have cut their fore-teeth, and

then accustomed by degrees to a more solid food, as bread and other light sorts of aliment, with which nurses are well acquainted. They should also be washed every morning with tepid water, and then well rubbed and dried; the nurse observing, for this purpose, the time when the child's stomach is empty after a long sleep; for they do hurt who wash and rub infants upon a full stomach. Galen finds great fault *, and seems quite out of humour with the northern custom of plunging new born infants into cold water, and disdainfully says, "that he does not write for Germans or such barbarians, any more than he would write for bears and lions;" and yet he recommends, to his polite Greeks and Romans, a more uncouth and painful practice of rubbing their tender infants all over with salt †, in order to render them healthy and hardy. But time and experience have every where abolished the practice of salting, and, to the great benefit of infants, have, in many places and families established the use of the cold bath under proper restrictions ‡, which may be seen at the bottom of the page. In justice,

* De feuit. tuend. lib. 1. cap. 10.

† Ergo recens natus infantulus, cujus corporis constitutio oculi nota vacat, primum quidem fasciis deligetur, sed corpori prius totale modice insperso, quo cutis ejus densior solidiorque reddatur. Ita vero qui secundum naturam sunt infantes, vel solo sale preparati munisque abunde fuerint: quando, qui siccorum myrti foliorum aut aliorum id genus insperione egent, iis plane vitiosus status sit. De san. tuend. lib. 1. cap. 7.

‡ The cold bath, by strengthening the solids, and promoting a free perspiration, gives liveliness, warmth, and vigour to infants, highly conducive to prevent rickets, broken bellies, scrophulous disorders, and coughs, to which they are extremely obnoxious in some countries.

justice, however, to our author, I must take notice that he is rarely guilty of any mistake in practice; and tho' his theory has been much mended in after ages, yet his practical observations are to this day very valuable. He proceeds in his directions, and says, great care should be taken of the nurse's diet, exercise and sleep, that so her milk may be good. That milk is good which is perfectly sweet, white, and of a due consistence, neither too thick nor too thin; but bad milk is somewhat bitter or salt, of an improper consistence and colour, and of a disagreeable odour.

countries. And nature seems to have pointed out this remedy, both to the ancient and new world. Virgil informs us, that it was a custom in Italy, long before the Roman times, to dip their new-born infants in the coldest streams:

Durum a stirpe genus. Natos ad flumina primum
 Deterimus, favoque gelu duramus et undis.

Æt. lib. 9. lin. 603.

And Sir William Pen, in his letter to doctor Bainard (bill of cold bath, part 2. pag. 291.) has the following words: "I am assured that the American Indians wash their young infants in cold streams, as soon as born, in all seasons of the year."

With regard to infants of a strong constitution, there can be no objection to the use of cold-bathing, especially if (to avoid a sudden transition from the warmth in which the fetus was formed to an opposite extreme) parents would defer it to the next summer after the child is born. But to guard against any possibility of danger to the infant from this daily and quick immersion of the whole body, let the nurse observe whether he becomes warm and lively immediately upon his being taken out of the water, or soon after he is rubbed dry and dressed; if so, the cold water will undoubtedly prove of service to him; but if, on the contrary, the child becomes chilly and pale, and especially if any of his limbs should be contracted or benumbed with the cold, and continue so for some time after he is rubbed dry and dressed, the use of the bath must be intermitted for a few days, and tried again when the child is brisker; or in case the same symptoms should return, it must be quite laid aside.

The

The nurse must not go near her husband while she gives suck, and should immediately be dismissed if she is with child. Infants should not taste wine, because it heats the body, and hurts the head; besides, they do not want any, and therefore feel not the benefit, but only the hurt it does.

A pure air is also necessary for children, not such as is permitted to stagnate in a close room; nor such as is loaded with the steams of standing waters, the filth of great cities with exhalations from dead animals, or rotten herbage. The same method of living may be observed in the second septennial period, as in the latter part of the first; with this farther care, that the child be then taught to use moderate exercise, but not too violent, lest it should stint * his growth. *That* is also the proper season to form his mind rightly by teaching him the rudiments of useful knowledge, and by habituating him to that modesty, and obedience, which will afterwards contribute greatly to the preservation of his health.

ART. II. Of OLD AGE.

OLD age, which may be called a natural distemper, or a middle state between health and sickness, is commonly dry and cold; for tho' the eyes, nose and mouth, often run with water; and tho' a cough and spitting generally attend old people, yet these are all excrementitious humours, and not a nourishing useful moisture. This cold-

* This opinion requires farther confirmation from experience.

ness and dryness should be relieved with a little wine, and such food as is proper to moisten and warm them. Chafing also, or rubbing with the flesh brush, is good for them, as it increases the motion of the blood, excites a gentle heat, and thereby helps to distribute an equal nourishment to all parts of the body. After rubbing, it will be convenient for them to walk or ride in some vehicle, but not so far as to fatigue themselves with either; for too much exercise makes them meagre, whereas moderate exercise keeps up their flesh. It is a rule not to be neglected, that old persons should persist in the use of such exercises as they have been most accustomed to, for these are not only less fatiguing, but also more entertaining and agreeable to them. Nor is it safe for them abruptly to substitute a new exercise in the place of an old one; for experience has taught us, that much walking has been hurtful to those who could bear riding * extremely well: And if any part of our body should happen to be more infirm than the rest, great care is to be taken that our exercise do not overfatigue the weak part; but let it be so contrived, that the stronger parts shall have motion enough, and the weaker parts shall receive no damage. If for instance, a man is subject to a giddiness, he ought not to use any exercise in which he must bend his head often, or turn round; but rather chuse to walk gently forward, or ride in some easy vehicle, without fatiguing himself.

* He means riding in a chariot, and not on horseback.

Or if a man's legs be weak, riding in a chariot will do him much more service than walking.

OLD people should avoid every sort of food that produces thick and glewy juices, as unfermented bread, cheese, pork, beef, eels, and oysters; and likewise every thing that is hard to digest. Their bread should be mixed with a due proportion of salt, and yeast or leaven; should be well kneaded; and thoroughly baked; otherwise it will occasion obstructions in the liver, spleen and kidneys.

IN case an old man should continue two whole days coltive, he ought on the third to take some very gentle thing to open his body, such as he knows by experience to answer that purpose; nor should he continue the same opening food or medicine always, but change it now and then for somewhat else, lest, by becoming habitual, it should lose its effect.

HE should also indulge himself in sleeping as long as will be sufficient to cherish and refresh him.

“ ANTIQCHUS the physician, when he was
 “ above fourscore years old, walked from his house,
 “ three * stadia to the forum, where the principal
 “ citizens of Rome met every day; and in his
 “ road visited such patients as lay near him. If
 “ he had farther to go, he took a chair † or some
 “ other vehicle. He had a small room in his
 “ house, warmed with a stove in winter, and
 “ temperate in summer, in which his body was

* Near half a mile. De sanit. tuend. lib. 5. cap. 4.

† Partim gestatus in sella, partim vehiculo vehebatur. Ibid.

“ well chafed and rubbed, after going to stool
 “ every morning. In the forum, about nine or
 “ ten o’clock, he eat some bread and boiled honey,
 “ and stayed there talking or reading till twelve.
 “ He then used some gentle exercise before dinner,
 “ which was very moderate, beginning always
 “ with something that was opening. His supper
 “ was either some light spoon meat, or a fowl
 “ with the broth in which it was boiled. And
 “ thus he lived with all his senses perfect, and all
 “ his limbs sound, to extreme old age.

“ TELEPHUS the grammarian lived to almost
 “ an hundred years; his breakfast was pure honey
 “ from the comb mixed with gruel. He dined
 “ always on salad, or some fish, or fowl; and
 “ for supper he only eat a little bread with a glass
 “ of wine and water.”

AN old man’s own experience must deter-
 mine whether a milk diet be proper for him or
 not, since it is surprizing to see what different
 effects it has on different constitutions. “ I knew
 “ a husbandman (says Galen) above an hundred
 “ years old, whose principal food was groats milk,
 “ with which he mixed sometimes bread, and
 “ sometimes honey; and now and then he eat it
 “ boiled with tops of thyme. A neighbour of
 “ his, imagining that milk was the cause of the
 “ old man’s long life, would try it in imitation of
 “ him; but could never bear it in any form; for
 “ it lay heavy on his stomach, and soon raised
 “ a swelling in his left side. Another mak-
 “ ing the same experiment, found milk agree
 “ with

" with him perfectly well, till after the seventh
 " day of trial, when he felt a hard tumour in his
 " right side, which occasioned a tension, with
 " spasms, quite up to his throat. I have also
 " known some, who, from a long use of milk,
 " had contracted a stone in the kidneys, and some
 " who lost their teeth, while others have lived upon
 " it many years in good health." The benefits
 which arise from milk to those with whom it
 agrees, are, to keep the body gently open; to
 produce sweet juices; and good flesh; especially
 when the milk comes from a pasture full of mild
 and wholesome herbs; for the milk cannot be
 good, where the herbs are too acrid, too acid, or
 too astringent. The animal also, which gives
 the milk, should be quite healthy, and in the
 flower of her age. And I should advise people to
 drink asses milk, and goats milk alternately, be-
 cause goats milk is the most nourishing; and asses
 milk, being thinner, is easiest of digestion.

THAT wine is best for old people which is
 strong and diuretic; it should be strong, in order
 to diffuse a proper heat over their cold limbs;
 and diuretic, to carry off any superfluous serosities,
 which by remaining in the body, might become
 injurious to their health. They should therefore
 chuse their wine of a light thin body, because such
 is commonly diuretic; and of a pale or yellow
 colour, because such is the strongest; but they
 should abstain from thick, black, or astringent wines,
 because they are apt to cause obstructions in the
 bowels. Nor indeed is sweet wine good for old
 men,

men, unless they are very lean, and, upon that account, require rich wines to nourish them; but then they should be of the generous, pale, or yellow kind.

ART. III. Of different TEMPERAMENTS, COMPLEXIONS and CONSTITUTIONS.

WE may reckon nine different temperaments of the human body, of which four are simple, the hot, the cold, the moist, and the dry; four mixt, the hot and moist, the hot and dry, the cold and moist, the cold and dry; and one which keeps a medium between all extremes, and may therefore be called the good or healthy temperament. The simple temperaments are easily known by the sight and touch. Among the mixt or compound, those which deserve the greatest regard in practice, and are most easily distinguished by their respective marks, are, the hot and dry; and the cold and moist. These being directly opposite in their natures, require each a very different management.

THE most common marks of a hot and dry temperament are large, turgid veins; a strong pulse; broad breast and shoulders; a robust, muscular, well proportioned body and limbs; black, thick, curling hair; and a rough, brown, hairy skin.

ON the contrary, a soft, white, smooth skin; fair hair; a narrow chest; small veins; a delicate body, generally plump; weak, ill-shaped limbs; and a feeble pulse, denote a cold and moist complexion.

As

As we daily observe men's temperaments differ so widely, that what does good to one, frequently does hurt to another; it is astonishing that any physician should attempt to prescribe rules for health, without taking notice of this difference; for as one shoe will not fit every foot, so neither will the same manner of living agree with all men. Nor can we pronounce universally of any aliment, that it is wholesome or unwholesome, because what agrees well with one, has been known to make another sick. "Two of my acquaintance, (continues he) had a warm dispute about honey; one maintained that it was unwholesome, the other affirmed the contrary, and both pleaded experience, without considering their respective temperaments; the one being a phlegmatic old man, who lived a sedentary life, with whom honey must agree, as it is of a warming penetrating nature; the other a young man about thirty, of a hot bilious temperament, to whom consequently honey must be hurtful."

SOME recommend exercise promiscuously for every person; others pretend that rest does as well. Some prescribe wine, others water, but experience teaches us that the same thing has often contrary effects on different persons. "I knew some men who, if they abstained three days from labour were sure to be ill; others I was acquainted with, who enjoyed a good state of health tho' they used little or no exercise. Primigenes of Mitylene was obliged to go into a warm bath every day, otherwise he was seized with

"fever."

" fever." Effects we learn from experience, but
 the cause of those effects we learn from reason and
 reflection. Why did Primigenes require such fre-
 quent bathing? " I found, by the burning heat of
 " his body, by his studious life, and by his never
 " sweating, that he wanted a free perspiration;
 " but his skin being thick and hard, and stopping
 " this perspiration, he required a warm bath to
 " mollify his skin, and open his pores. I knew
 " another whose temperament was equally hot,
 " but did not require bathing so frequently, be-
 " cause by his trade of walking much about the
 " city to buy and sell several things, and by being
 " of a quarrelsome disposition, and fighting fre-
 " quently, he kept himself, for the most part, in
 " a sweat, which prevented a fever. A third person
 " of a hot and dry constitution I was obliged to
 " restrain from exercise, because he used it to
 " excess; and herein I followed the rule of Hip-
 " pocrates, who says, that hot temperaments
 " should rather indulge rest than use too much
 " exercise. On the other hand, I have restored
 " health to several persons of a cold tempera-
 " ment, by rousing them from a lazy life, and
 " by persuading them to labour." It is plain
 therefore that different degrees of exercise and
 different sorts of food are necessary to different
 complexions. Those respective differences are,
 indeed, to be investigated by the understanding,
 but experience must always confirm our reason-
 ing.

It must be farther observed, that besides pre-
 scribing

cribing a warm bath, and the most gentle exercise to hot and dry temperaments, it is also necessary that their food should produce sweet juices without any acrimony; that water should be their principal drink; that they should avoid anger; too much study; and the scorching heat of the sun. And as the heat of a temperament commonly proceeds from a redundancy of bile, we should diligently inquire whether this bile is apt to go off by stool? If it does, we need not be very solicitous about the consequences of it, for nature will do her own work; but if it returns upwards, it must be evacuated by a very gentle puke.

ALL the physicians and philosophers who have treated on the elements of the body with any accuracy, have condemned the dry temperament, as being of itself a sort of old age, and have praised the moist as the fittest to prolong life, and preserve health and vigour to extreme old age. A moist temperament is indeed inconvenient in infancy, but afterward becomes the most healthful of all the temperaments that run into any excess. Those therefore who preside over health, should guard against such things as dry and waste the body too much, but still without running into the contrary extreme; and this just medium is preserved by a prudent use of exercise and bathing, by keeping the natural evacuations within their proper bounds; and especially by such food as will supply good juices, and by a moderate use of wine.

ART. IV. Of those whose TIME is not in their own power.

To statesmen, and students, whose employments engross too much of their time, Galen prescribes the three following rules: First, that after any extraordinary attendance or meditation, they should live more abstemiously than usual; and affirms of himself, "that when at any time he was fatigued and spent with business, he chose the most simple food he could think of, which was commonly bread alone:" And tho' he does not propose this rigorous abstinence as a model for others, yet he insists upon it, that after great fatigue, people's food should be light and of easy digestion. His second rule is, that their common diet should be plain and simple, and such as they can easily digest. And his third rule directs them to set apart some portion of their time for exercise every day, (whatever their engagements may be) or if that be impossible, to lose a little blood sometimes to prevent a plethora, and to take now and then some gentle physick to purge their bowels from the corrupted humours accumulated there by indigestion, without which precautions, they must of necessity fall into bad distempers. He also advises such inferior servants as are tied down to a sedentary inactive life, to take the opportunity of festival days to relieve their bowels from corrupted humours by gentle purging. But alas, adds he, so great is the intemperance of the vulgar, that instead of employing those idle days in procuring

procuring health or any other good to themselves, they, on the contrary, indulge their appetites to the utmost, whenever they have any opportunity of doing it, and thereby accumulate bad humours, which afterward break out in rheumatism, gravel, or some other distemper, which afflicts them for the remaining part of their lives.

I shall conclude Galen's precepts concerning health, with the following excellent advice which he gives to his readers: "I beseech all persons, says he, who shall read this treatise, not to degrade themselves to a level with the brutes, or the rabble, by gratifying their sloth, or by eating and drinking promiscuously whatever pleases their palates; or by indulging their appetites of every kind. But whether they understand physick or not, let them consult their reason, and observe what agrees, and what disagrees with them, that, like wise men, they may adhere to the use of such things as conduce to their health, and forbear every thing which, by their own experience, they find to do them hurt; and let them be assured, that by a diligent observation and practice of this rule, they may enjoy a good share of health, and seldom stand in need of physic or physicians."

C H A P. IX.

Of Porphyry, and those who condemn the use of animal food.

PORPHYRY of Tyre, who lived about the middle of the third century, and was a favourite disciple of Plotinus the Platonist, endeavours, in his celebrated book *concerning abstinence from animal food*, to revive the primeval simplicity of diet; and exclaims violently against the use of flesh meat.

HE addresseth his book to Firmus Castrius, who had relinquished the Pythagorean abstinence, and tells him, “ you owned, when you lived among us, that a vegetable diet was preferable to animal food, both for preserving health, and for facilitating the study of philosophy; and now since you have eat flesh, your own experience must convince you, that what you then confessed was true.” It was not from those who lived on vegetables, that robbers * or murderers, sycophants or tyrants, have proceeded, but from flesh eaters. The necessaries of life are few, says he, and easily acquired, without violating justice, liberty, health, or peace of mind; whereas luxury obliges those vulgar souls, who take delight in it, to covet riches, to give up their liberty, to sell justice, to mispend their time, to ruin their

* This is an assertion at random, without any proof, nor indeed possible to prove it.

health, and to renounce the joy of an upright conscience. " In order to recover our health, and
 " remove distempers, do we not patiently submit
 " to incisions, to causticks, and to nauseous po-
 " tions, besides rewarding those who prescribe
 " them : And shall we give ourselves no trouble
 " to remove distempers from our minds which are
 " immortal?"

HE takes great pains to persuade men of the truth of the two following propositions: *First*, That a conquest over the appetites and passions will greatly contribute to preserve health, and to remove distempers. *Secondly*, That a simple vegetable food being easily procured, and easily digested, is a mighty help toward obtaining this conquest over ourselves.

To prove the first proposition, he appeals to experience, and asserts, that some of his own companions, who had been tormented with the gout * in their feet and hands to such a degree, that they were under a necessity of being carried about from place to place for eight years successively, were perfectly cured by disengaging themselves from the care of amassing riches; and by turning their thoughts to spiritual objects; so that, together with their anxiety for wealth, their bodily distempers soon left them. In confirmation of the second proposition he argues in the following

* If his companions had brought the gout upon themselves by high riotous living, (which is very probable) a low, vegetable, milky diet, persisted in, might be of service to them; which is a proof, that a total abstinence from animal food is either necessary or expedient to prevent distempers.

manner: " Give me a man who considers seriously,
 " what he is, whence he came, and whither he
 " must go; and from these considerations, resolves
 " not to be led astray, or governed by his passions.
 " And let such a man tell me whether a rich
 " animal diet is more easily procured, or incites
 " less to irregular passions and appetites, than a
 " light vegetable diet? But if neither he, nor a
 " physician, nor, indeed, any reasonable man
 " whatsoever, dares to affirm this; why do we
 " oppress ourselves with animal food? And why
 " do we not, together with luxury and flesh meat,
 " throw off the incumbrances and snares which at-
 " tend them?"

THUS declaims the philosopher Porphyry, who might and ought to have informed himself better, by reading *Galen's treatise on the nature of aliments*, which would have easily convinced him that a mixture of animal food with the vegetable kind, is more proper for the healthy, more strengthening for the infirm, and more easily digested, than a simple diet of vegetables only. And, indeed, all that our philosopher has advanced on this head, favours more of the rant of an enthusiast, or the mortification of a hermit, than of a physical knowledge, or just reasoning; and yet there have been multitudes of the same opinion with him.

THE ridiculous notion of the transmigration of souls, and some other unaccountable fancies, have induced several sects of philosophers, and

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their

their admirers to abstain from an animal food, as far back as Pythagoras, and down * to this day.

THE grave Plutarch has written two discourses in favour of this abstinence, tho' it is matter of fact that he himself eat flesh, like other people. But as it would be of little use toward the preservation of health, to give a long historical detail of what has been advanced upon this head, I shall only take notice of our learned countryman doctor Cheyne, who in some measure adopted the same notions, and blended them with his rules of health. To understand the latter writings of this *ingenious* and *whimsical* author, we must carefully distinguish the MYSTIC from the PHYSICIAN. In his mystical character, he thus declaims: "I am † almost
 " convinced that the flesh of animals was not intended, in the original design of the creator,
 " for food to the human race, but only permitted
 " as a curse or punishment, to let them feel the
 " natural effects of their concupiscence, by painful distempers, which should give them a dislike to the lust that produced these pains, and
 " make them return to the love of virtue and of
 " God."

* " All the Pagans in the East Indies hold the transmigration of souls. Tho' they all profess one religion, yet they are divided into eighty four sects or tribes, each of which has its peculiar rites. The first and principal tribe is that of the Brachmans, which is divided into ten several sects: The first five feed on herbs and grain, without ever eating any thing that has life; in which they are imitated by the whole tribe of the Barmans." See doctor John Francis Gemelli's voyage.

† Discourse 2. pag. 54, 55. I shorten his declamation.

BUT when in his character of a physician he inquires into facts, and calmly considers the reasons alledged for giving the preference to vegetable aliment in general, this consideration staggers him; and he is forced to acknowledge, that* “several sorts of vegetables, and substances prepared from them, as onions, mustard, nuts, pickles, spices, aromatics, and especially fermented liquors, are more inflaming, and deleterious than some mild animal substances.”

If, therefore, animals were not originally intended for human food, and yet there are some vegetables in common use more pampering and inflaming in their nature than several animal substances, how shall we moderate the difference between these opposite opinions, and reconcile the *Mystic* with the *Physician*?

THE *experienced Physician* prevails at last over the *enthusiastic Philosopher* to abate of his rigour, and to accommodate differences, by the following friendly compromise: *viz.* “That for bodily † strength, animal food, and fermented liquors are fittest, if moderately used; but for intellectual exercises, vegetable food, and unfermented liquors seem appropriated; and that consequently the best way to secure the golden mediocrity between bodily strength and spiritual vigour, is for the healthy to confine themselves to about a pound, or at least half a pound of animal food, and a pint, at least half a pint of fermented liquors daily; but for the valetudi-

* Discourse 2. pag. 75. † Discourse 2. pag. 88.

"nary and studious to sink below this medium in
 "both these, 'till by experience and observation
 "they find what quantity of either they are easiest
 "under; and to stick to that, should it be even
 "to descend totally into vegetables, milk and un-
 "fermented liquors."

BUT notwithstanding the singularities of this
 learned writer, we find, among his aphorisms
 relating to health, some which deserve our atten-
 tion, and have not hitherto been mentioned: Of
 these the four following are the principal.

1. HE that would * be soon well, must be long
 sick, that is, treat himself as a valetudinarian in
 most things. Aph. 8.

2. RIDING on horseback is the best exercise to
 recover lost health; and walking, the best to pre-
 serve good health. Aph. 25.

3. GOOD hours will be always a most beneficial
 means to preserve health and spirits; to go to bed
 by ten, and rise by six. Aph. 30.

4. VOMITS often and properly repeated, are
 the sole universal antidote and panacea of Britain;
 an ailing person cannot repeat them too often,
 (provided his constitution can bear them) and they
 will always prove beneficial and salutary †,

* Pract. essay on the regim. of diet. pag. 60. et seq.

† He means that gentle pukes, frequently repeated, are by ex-
 perience found useful in curing hypochondriacal or nervous disor-
 ders produced by high living.

C H A P. X.

Of Oribasius, Aetius, and Paulus Aegineta on health.—Of Actuarius and others, as Friar Bacon and Lord Verulam, who imagined that health might be preserved, and life prolonged by antidotes and panaceas.

ORIBASIUS, and the succeeding Greek physicians who wrote concerning health, have done little more than copy Galen; but I must observe to the honour of Oribasius, that he was the first of the Greek physicians * who can properly be said to have recommended the exercise of riding on horse-back toward the preservation or recovery of health; for he declares in express terms, that

* 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 be justly 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 sanitate tuenda*, lib. 2. cap. 11.) that "riding on horseback is a mixt 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~~ the use of stirrups ~~was not known~~ ^{was not known}. This, I think, was hint sufficient, to induce Oribasius, who copied Galen to recommend riding on horseback.

But after all, there is nothing more certain than that riding on horseback was reckoned a healthful exercise many ages before Ori-

“ it strengthens * the stomach above all other parts
 “ of exercise, that it clears the organs, and makes
 “ all the senses more acute.

AETIUS wrote about the end of the fifth century. He is somewhat more particular than Galen in the care of infants †, and choice of nurses; but takes most of his other rules of health from him.

PAULUS ÆGINETA, who, according to the learned and accurate doctor Friend, lived about the year 621, bestows his whole first book *de re medica* upon the subject of health, but has scarce said any thing new.

THE last of the Greeks who has touched upon the preservation of health is Actuarius. He lived in the thirteenth century, and practised physic with a good deal of reputation at Constantinople. He treats of health in a cursory manner in the third book of his method of cure; but seems to depend more on the efficacy of particular antidotes to preserve health, than on any general rules. To give an instance of this with regard to the antidote which he calls *health*. He affirms ‡, that any

basis or Galen. For Xenophon in his oeconomics (lib. 2. sect. 3.) introduces Ischomachus telling Socrates, that “ he rode on horseback to see his servants in the country ploughing, sowing, and planting; adding farther, that he rode over all sorts of roads, by way of exercise.” Which conduct Socrates approves in the following “ you, by your exercise, by Juno, pleases me much, which gives and strength of body.”

* Medic. collect. lib. 6. cap. 24.

† Tetraibibl. 1. ferm. 4.

‡ Method. medend. lib. 5. cap. 6.

man who takes the quantity of a lentil of this medicine every day, will never be seized with any illness all his life; and says that it will remove inflammations of all sorts, and will also *drive away witches and evil spirits*. Those who are feverish should take it in water, and those who are not feverish, in wine.

THE ingredients of this wonderful composition are rue, pepper, myrrh, saffron, cinnamon, spike-nard, euphorbium, mandrakes, poppies, and twenty simples more, all made up with honey.

IT is true that this infatuation, of depending upon particular medicines to secure health, prevailed in the world many ages before Aesculapius, and has continued down to our days; but he seems to be the first physician of any reputation, whose credulity on this head was unbounded.

HOMER mentions * the φάρμακον Νηκευθίς, or “Egyptian cordial, which communicated the highest joy to those who took it, and banished every sort of melancholy.”

PLINY describes a plant, “very like lettuce, called *Dodecatheon*, or *the twelve Gods*, which, infused in water, was said to cure all distempers. And a sort of Piony, called *Panacea*, from its all-healing virtues.”

IN the time of Herophilus, some compositions had the pompous appellation of *the bands of the Gods* bestowed upon them; and Galen’s remark

* Νηκευθίς τῆλεχός τε, καὶ ἐν ἐπιλήθον ἀπάντων. Odyss. lib. 14
lin 221.

† Lib. 25; cap. 4.

upon them is good, *viz.* "Herophilus † spoke truth, when he said that these compositions, considered in themselves, were of no value; or might do mischief if he who prescribed them was ignorant; but when administered properly by a prudent and experienced physician, they might be called *the hands of the Gods*, from their utility."

THIS method of depending upon particular *nostrums*, was a shorter and easier road to health, than the rules of Hippocrates and Galen, which required *temperance* and *exercise*; and had it proved effectual, all the world would readily have gone into it; but it was found, after many trials, to be attended with perpetual disappointments. Such, however, is the weakness of the human mind, that among the most ingenious men, which *this*, or *any nation* produced, some were deceived into a belief of *universal Panaceas*, endowed with virtues sufficient to keep off distempers to extreme old age; and others, extending their views still farther, proposed, by a proper use of a few chosen remedies to protract the life of man beyond the common limits assigned to it by nature, which seem to have been nearly the same from the days of the Psalmist § down to ours.

FROM a multitude of *Nostrum-mongers*, that might be quoted here, I shall select Friar Bacon and lord Verulam, to shew how short sighted man

• † De comp. medicam. local. lib. 6. cap. 3.

§ Psalm. xc. 10.

is; for who can be secure from falling, if two such great geniuses could stumble?

FRIAR BACON, in his larger work, dedicated to Pope Clement IV. says, that the reason why the life of man is much shorter now than it was in the beginning of the world, is, "because people
 " have neglected, in all ages, to observe a proper
 " regimen for the preservation of health. This
 " neglect has been universal, the physicians have
 " been careless. In youth health is never thought
 " on. One perhaps among three thousand, may
 " think of it when he grows old, hoping, too late,
 " to stop death from coming in, when he is just at
 " the door. But is there no way of remedying this
 " evil which men's ignorance and negligence have
 " brought upon them? Has nature no secret,
 " which art may find out, to procure health and
 " long life? Yes, There have been men, who,
 " by their researches into the secrets of nature,
 " have discovered antidotes to ward off old age.
 " And the good experiment-maker *, in his book
 " concerning the proper regimen † of old people,
 " gives an enigmatical description of a certain
 " composition, which when rightly understood,
 " retards, for many years, the advances of old
 " age:" viz. You must take that which is temperate in the fourth degree. That which swims in the sea. That which vegetates in the air. That which is cast out by the sea. That which is found

* Peter de Maharn-court a Picard, whom Bacon calls dominus experimentorum.

† This book I could find no where.

in the bowels of a long lived animal. A plant of India: And two creeping things which are the food of Tyrians and Egyptians. And let them all be properly prepared. This *riddle* Bacon explains in the following manner: That which is temperate in the fourth degree is *gold*, chymically prepared. What swims in the sea is *pearl*. The flower of *rosemary* grows by virtue of the air. *Sperma-ceti* is thrown out by the sea. The *bone* found in a stag's heart is taken out of the bowels a long lived animal. The Indian plant is *lignum aloes*. And the creeping things are *serpents*, of which the flesh must be properly prepared. This antidote, says Bacon, "prevents the corruption of any constitution, and the infirmities of age for many years."

BUT alas! In spite of this antidote, his friend pope Clement died soon after, and left him to the mercy of his old enemy pope Nicolas, who imprisoned him for a long time at Paris. And poor Bacon, who deserved a better fate, after a great deal of bad usage from an ignorant and superstitious world, died at Oxford in the seventy-eighth year of his age, A. D. 1294. leaving us a convincing proof of the vanity of secrets, even in the best hands.

THE great lord Verulam, after ridiculing the complaint of Hippocrates, that "life was short, and the healing art tedious." And after justly stigmatizing † the vain and extravagant encomiums bestowed upon chymical secrets, and celebrated

* Pag. 1. † Pag. 194 et seq. hist. vit. et mort.

antidotes, which at first flatter and at last deceive, he himself, proposes a method *to prolong life*, which, upon a fair trial, will be found equally fallacious with the boasted preparations of the chymists.

THE two great causes * of death, says he, are first "the internal spirit, which like a gentle flame, wastes the body: And secondly, the external air that dries and exhausts it; which two causes conspiring together, destroy our organs, and render them unfit to carry on the functions of life:" But this waste and depredation committed by the *internal Spirit*, may be repaired, first, by making the substance of it more dense, through a regular course of *opiates* taken in small doses, and at certain times; and secondly, by moderating its heat, which may be done, says he, by a proper use of nitre.

He owns, indeed, with a generous frankness, that "his manner † of life did not permit him to make the necessary experiments upon these medicaments," which is much to be lamented, for, without repeated experiments it will be utterly impossible to establish opinions of this nature; and he who considers that *opium* is found by experience to weaken the nerves, and that *nitre* cools to a great

* *Causa periodi est; quod spiritus instar flammæ levis perpetuo depredatorius; et cum hoc conspirans aër, qui etiam corpora sugit, et arefacit officinam corporis; et organa perdat, et inhabilia reddat ad munus reparationis.*

† *Desertè profitemur nonnulla ex iis quæ proponimus experimento nobis non esse probata, neque enim hoc patitur nostrum vitæ genus.*
Hist. vit. et mort. pag. 203.

degree, will scarce think these drugs proper for old age, when warmth and vigour are wanted.

OUR author treating also of *air*, which he reckons the other great cause of premature death, recommends *chalybeate baths*, and *greasy unctions*, to exclude it; but being aware that this would stop the perspiration, and occasion distempers, he orders glysters and purges, as a succedaneum, to carry off the redundant humours; which method would not answer very well in practice.

UPON the whole, our noble author discourses here not so much like a physician, as a profound philosopher, whose universal knowledge and sublime genius prompted him to control the common appearances of nature, and to stretch, if possible, the human life beyond its usual period. But it is remarkable, that tho' this great man took three grains of his favourite *nitre* every morning for the last thirty years of his life, he died nevertheless in the sixty-sixth year of his age.

HIS general precepts concerning long life are much more valuable; *viz.* First, that a frequent remembrance of the entertainments of youth cheers and enlivens old people to a great degree. And here he observes, that the emperor *Vespasian* could not be prevailed upon to alter his father's dwelling-house, tho' very incommodious, lest he should forget how he had passed his youth there; and that on festivals he drank out of his grand-mother's wooden cup edged with silver.

IN his second precept he advises men to spend their youth and manhood in such a prudent man-

ner as will enable them to retire from the fatigue of business when they grow old, and employ their time in such contemplations, amusements, and rural recreations of building and planting as will give entertainment to their minds, and vigour to their bodies.

His third rule directs to take particular care that the stomach, *the father of the family*, be always kept in good order; to which nothing contributes more than, now and then, to take a little something that will open the body gently, without giving it any disturbance.

His fourth rule is, that once every two years, those who begin to grow old should alter their whole juices *, and make themselves very lean, by a course of diet-drinks and abstinence, in order to sweeten their blood and renew their youth.

C H A P. XI.

Of the Arabian physick.—Its commencement.—Of Rbafes and Avicenna concerning health.—Return of physick from Arabia to Europe.—Of the Tacuin or Elluchasem Elimitbar.

THE science of physick having passed from the Greeks to the Arabians and Persians, we must follow it thither, and inquire what improve-

* Boerhaave, in a great measure, adopts this rule, and says, "Mutationes fere radicales humorum per resolventia, horum deinde excretiones succedentes. — sicpe disponant corpus — ad vitam longam." Vid. instit. med. lect. 1059. 1062. But more of this hereafter.

ments they have made in our subject of the preservation of health.

Two accidents principally contributed to carry the Grecian physick into the eastern parts of Asia. One was the marriage of Saporess* king of Persia to the daughter of the emperor Aurelian, who, in compliment to her, sent thither several Greek physicians, by whom the Hippocratical medicine was propagated in that country, probably at Nibur the capital of Chorasan, built by the same Saporess, A. D. 272. And hence it was (as the learned doctor Friend conjectures) that most of the celebrated professors in physick, Rhases, Hally-Abbas, and Avicenna, were educated in those parts.

THE second accident was the taking of Alexandria by the Saracens, A. D. 642. For tho' the famous library there was destroyed, it is probable that the writings of the old Greek physicians might be spared, merely (as our ingenious historian † observes) because they treated of physick; the desire of health being as strong in the Arabians as in other people.

RHASES was the first Arabian I know of, who has given general rules of health. He was born in Persia, and was called to Bagdat when he was thirty years old; where he was afterwards chosen, out of a hundred eminent physicians, to take care of the celebrated hospital in that city. And there he died at the age of fourscore, A. D. 932. He was also physician to Almanzor lord of Chorasan,

* Friend's hist of physick, part 2. pag. 10.

† Hist. of physick, part 2. pag. 4.

to whom he dedicated several of his writings; and, among the rest, a *treatise on the preservation of health*.

IN this treatise he has exhibited a plain and useful summary of several important rules of health, which (tho' mostly borrowed from the Greeks) deserves to be set, in one view, before the reader as follows:

1. HEALTH is preserved by a just measure of exercise and the other *Non-naturals*; and also by the cleanliness of the place in which we live; and by a perseverance in the use of such things as we have been long accustomed to, unless our customs have been bad, in which case we ought to depart from them, not abruptly, but by slow and regular degrees.

2. EXERCISE should be used when a man's stomach is empty; and should be left off at the moment he finds it begin to grow tiresome and uneasy to him.

3. A man ought not to postpone his meal when a sound and natural appetite prompts him to eat; but should never eat so much as to overload his stomach, or straiten his breath.

4. HE who loaths his food, should fast for some time, or take a gentle dose of physic.

5. No liquor is equal to good wine.

6. A man who eats much, and uses little exercise, should frequently take some easy purge.

7. IF a man finds any uncommon change in himself for some days, that is, if he sleeps, sweats, or otherwise discharges more or less than usual, he should

should inquire into the cause of that alteration, and remove it before it can produce any bad effect.

8. **CHEARFULNESS** adds to one's strength and spirits, but grief impairs both.

9. A meagre man should avoid frequent concubinage, as he would an assassin. But it is one of the best cures for those who are desperately in love, and will often make them forget the beloved object.

10. **GENTLE** physick is better, generally speaking, for old people than bleeding; and good wine mixed with water, their best drink. Their exercise should be such as is pleasant to them, and proportioned to their strength; their food should be of easy digestion; and their sleep long.

AVICENNA was born at Bochara in Persia, A. D. 964, and died in the fifty-eighth year of his age. The fame of his work called the *Canon* prevailed so much, not only in Asia, but also in Europe, that there was scarce any other doctrine taught in the schools of physic before the restoration of learning, about the close of the fifteenth century. I have read with care all that he says concerning the preservation of health, both in his canon, and in his book * of *rectifying the errors committed in the use of the six things necessary to man's life*, and have found nothing in either that deserves the extravagant encomiums bestowed upon the author: He has principally copied Galen's rules of health, but has given them such a quaint con-

* De removeendis nocementis que accidunt in regimine sanitatis, ex errore usus rerum non-naturalium.

ceited dress and air by his refinements * and subtilties, that it is not easy to understand them. His own additions may be reduced to the few following, viz.

1. A man in a passion ought not to eat food that is of a heating nature; and one under terrour should not eat things too cooling.

2. ONE should be more abstemious on the days he takes physic than at other times.

3. No man should go to sleep immediately after bleeding.

4. AFTER fasting long at sea, or in times of famine at land, people should eat sparingly, and come to make full meals by slow degrees, otherwise they will destroy themselves, as it happened in the city of Bochara, where those who had lived on roots and herbs in time of the famine, when they came to have bread and flesh in abundance, filled themselves greedily and died.

5. TENDER habits of body receive great benefit from bathing in chalybeate waters.

SOME rules he recommends, which, among us, would be thought somewhat awkward and troublesome. I shall mention but two.

* *Ars custodiendi vitam illa est, quæ corpus humanum perducit ad hanc ætatem quæ vocatur terminus vitæ naturalis, secundum observationem convenientium et necessariorum rerum, quæ sunt septem: Æqualitas complexionis. Electio eorum quæ comedantur et bibuntur. Purgatio superfluitatum. Rectificatio ejus quod per nares extrahitur. Rectificatio indumentorum de summi tangentium. Moderamen motionum corporearum et animalium, inter quas sunt somnus et vigilia. Ex libra canonis doctrin. 1. dictionis tertie.*

1. **WHEN** a person is much fatigued after a long journey, let some milch animal be milked upon his head, and let him go to sleep.

2. **WHEN** a man is obliged to travel into a far country, let him carry along with him some *earth* of his own country, to be mixt with the foreign water which he is to drink. This native earth well stirred in, and then standing to settle, will mend the noxious qualities of the foreign water, and prevent any bad effects from it. "It should be observed, indeed, that the Arabians were the more obliged to be careful about their water, because their religion did not permit them to drink wine."

HAVING thus taken notice of the introduction of the Greek physick into Persia and Arabia, and having seen the rules of health recommended by two of their principal physicians; we must now pursue this art back again from Arabia into the western parts of Europe, whither it was brought by means of the Croisade, and by the Moors settled, during the eighth century, in Spain, where they established hospitals at Seville and Corduba.

THE truth is, physic was very low in Europe from this time to the close of the fifteenth century, when, after the taking of Constantinople * by the Turks, many of the Greeks retired into Italy, and carried their ancient manuscripts with them. These strangers, encouraged by some generous patrons of learning, especially by the Great Dukes of Tuscany, set the faculty upon understanding

* It was taken in May 1453.

and explaining the Greek physicians, and examining how far the Arabians had followed or deviated from them; which laudable researches opened the way (tho' slowly) to farther improvements.

THE first performance concerning the preservation of health that appeared in this ignorant period, was the *Tacuin* or *tables of health*, composed by two physicians, at the desire of Charles the great, and published under the name of *Elucbasem Elimitbar*. This book is rarely to be met with, except in public libraries, which is no great loss, being but a mean, perplexed, whimsical performance *, and scarce worth taking notice of, but only because it happens to be sometimes quoted by the learned.

THESE tables, by their divisions and subdivisions, rather confound than edify the reader, as will appear by the words † of the author, cited at the bottom of the page.

* P. Daniel, in his history of France, says that Charlemagne had a great aversion to all physical regimens, which we need not wonder at, when we are told that the authors of the *Tacuin* were his physicians. His words are, "Il avoit une horreur extreme de tous les regimes de médecine, qui a'loit presque jusqu' a ne pouvoir souffrir la presence d' un medecin." Tom. 1. pag. 557. edit. Paris.

† Cum Dei auxilio compono tabulas continentes cibos et potus, et alias res necessarias circa ipsos, ad hoc quod sit compendiosum regibus et dominis conspiciere in ipsis; et dividam tabulas per domos. In prima domo ponam numerum; in 2da nomen; in 3tia naturam; in 4ta gradum; in 5ta melius illius speciei; in 6ta juvenentum; in 7ma nocumentum; in 8va remotiorem nocumenti; in 9va humorem qui generatur ex ea, et consequenter, in aliis quatuor comitus, convenientias ejus secundum complexionem, etates, tempora anni, et naturas regionum. In domo 14ta opiniones hominum in ea. In 15ta electiones et proprietates. Deinde faciam canones universales in genere illius de quo loquimur: Et in rubrica primi marginis juxta quod dixerunt Astrologi de illo.

C H A P. XII.

Of the Schola Salernitana and others, who wrote on the preservation of health in verse.

NEXT to the Tacuin comes the Schola Salernitana, written about the end of the eleventh century, for the use of Robert Duke of Normandy, son to William the conqueror, who in his return from the holy war consulted the physicians of Salerno about a wound he had received in his arm, which became fistulous. This poem was probably intended to direct him in the care of his health when he should have no physician at hand to advise with, and continued in high esteem * for a long time after, in so much, that about the fourteenth century Arnoldus de Villa Nova could not recommend himself more effectually to Frederic king of Sicily and Naples, and to his subjects, than by writing a commentary upon it. Nor can we wonder at their partiality in favour of this Gothic composition, when we consider the time in which it was produced. This book, in some editions †, bears the title of *The flower of physick*.

OF the six articles necessary to human life, the Schola Salerni dwells principally upon aliment, but touches also upon the rest in a cursory manner.

* Doctor Friend tells us that Benj. de Tudeela a Jew, upon his return from his travels over the greatest part of the known world, A. D. 1165, commends Salernum for the best seminary of physicians among the sons of Edom, i. e. the christians.

† Hoc opus optatur quod flor medicina vocatur.

THE advice † to persons of a studious and sedentary life, that they should accustom themselves to light suppers, seems very rational. And, perhaps, the most curious part of the whole poetical composition is the description there given of the four complexions, viz. sanguine, choleric, phlegmatic, and melancholic, and the marks by which the prevalence of each may be distinguished. Persons of a sanguine complexion, says this author, are plump, ruddy, chearful, generous, brave and benevolent. The choleric are thin, dry, yellow, wrathful, bold and impetuous. The phlegmatic are pale, fat, slothful, feeble, and stupid. And the melancholic are fallow, silent, wakeful, timorous, cunning, and tenacious.

BUT upon the whole, if we read this poem without the notes and amendments of Villa Nova, and others who have honoured it with their explanations, we can hardly forbear assenting to the truth of the character given it by Lommius*, of being a *rude and illiterate performance*.

JOHN of Milan, Author of the *Schola Salernitana*, having been the first who prescribed rules of health in verse, it will be proper to subjoin here such other physicians as have treated the same subject in a poetical manner, that we may place them

† Ex magna cœna stomacho fit maxima poena,

Ut sis nocte levis, sit tibi cœna brevis. Cap. 5. lin. 1.

* Minus placet quod fieri hodie a multis video, versiculos aliquot inconditos, scholamque sequentibus Salernitanam, quâ, vix scio, an quicquam in literis medicorum inelegantius sit, aut indoctius. Lom. comment. in Celsi librum prim. de san. tuend. epist. nuptiarum.

in one view, tho' they lived in different ages; and indeed the trouble of comparing them will not be great, for they are but few.

THE second is Castor Durante, who writes with much more elegance * and judgment than his predecessor. He was a citizen of Rome, and physician to pope Sixtus Quintus, to whom he dedicates his poem, upon which he himself, for the benefit of one of the court ladies, wrote a commentary in Italian, entituled *Il Tesoro della sanità*.

* He begins with a concise and lively description of the which a man should chuse to live in:

Si cupis incolumem vitam producere, coelum
Effuge corruptum nebulis, nidore, lacunis;
Quodque movet madidus morboſis Africanus auris.
Purum ama, et ad solem nascentem, et lumine spicuum,
Purgatumque Euro, et Boreali frigore tersum.

But I must observe upon the whole, that it is dangerous to prescribe rules in verse on such a delicate subject as health, because the poet may now and then raise the *Poet* above the reach of salutary precepts, and make him forget the *Physician*. To give an instance of this, Durante enumerating, after Hippocrates, the qualities of good water, says,

Sic aqua clara fluat, qualis nitidissimus aer,
Dulcis, et exigui ponderis, et gelida;
Et tenuis currat, nullo purissima limo,
Sitque sapor nullus, sit procul omnis odor.
Frigescat breviter, modico simul igne caleſcat
Utilis, et duris apta leguminibus.
Hanc mihi si quis aquam dederit vinosa, valetis
Pocula, nam vincit optima lymphæ merum.

Thus the *Physician*; but the *Poet* recollecting, perhaps, that we
vivere carmina possunt quæ scribuntur aquæ potabilis, presently
subjoins,

Vina bibant homines, animalia cætera fontes:
Absit ab humano pectore potus aquæ.

IN this treasure of health, he gives, from Hippocrates and Galen, a clear and succinct account of the common rules to be observed with respect to the six things necessary to human life; and adds, here and there, a remark of his own, adapted to the place in which he lived. He recommends, for example, singing * of psalms, and reading of pious histories, to cheer and elevate the mind, and enable it to resist and overcome the infirmities of the body. He is sufficiently prolix, in his poem, on the different sorts of aliment in common use; where, among other things, he recommends rats †, frogs ‡, and hedge-hogs §.

BUT of all the poetical performances on this subject, that have come to my hands, doctor Armstrong's *Art of preserving health* is by far the best. To quote every charming description, and beautiful passage of this poem, one must transcribe the whole. We cannot however expect new rules, where the principal design was to rouse and warm the heart into a compliance with the solid precepts of the antients, which he has enforced with great strength and elegance. And, upon the whole, he has convinced us by his own example, that we ought not to blame antiquity for acknowledging,

One power of physick, melody, and song.

* *Li cantare i salmi, et attendere all' istorie theologiche, diletando all' animo, lo pascono in modo, che tutte le virtu diventano piu forti a resistere all' infermita, et a superarle.*

† *Nil juvat umbrosi latitare cubilibus antri
Clis tibi, vita et mors hic tibi serenus erit.* Pag. 216.

‡ *Ranarum alba caro, sed semper durior eica.* Pag. 282.

§ *Utere Echino hilaris, stomachum fovet, ilia mollit.* Pag. 222.
editionis Bonibell. Venet. an. 1596.

C H A P.

C H A P. XIII.

Of Marsilius Ficinus and others, who joined astrology with physic, in order to preserve health.—Mention is also made of Platina Cremonensis.

BUT to return to plain prose: Some * learned Greeks were sent for, and entertained by the illustrious family of the Medici and others, who taught their language and learning to several persons in Florence and Venice, before the Turks took possession of Constantinople in the 1453. But many more † retired after the taking of that city, and carried their Greek manuscripts with them into Italy, where they soon spread the Grecian literature among a people eager to receive and study it. Among other sciences that began to revive in the West from this calamity of the Greeks, physic raised her languid head, but could not, for a long time clear herself from the follies of astrology, superstition, and witchcraft, with which she had been corrupted, since her departure from ancient Greece.

MARSILIUS FICINUS, the translator of Plato's works, was the first physician, after the revival of learning in the western parts of Europe, who wrote concerning health. He was born in Florence, and educated in the family of the great Cosmo de Medicis, who appointed him preceptor

* Particularly Joannes Argyropilus and Emanuel Chrysoloras.

† As Theodore Gaza, Lascaris, &c.

to his sons, and bestowed a handsome estate upon him. Among his other voluminous works he published a treatise concerning health and long life: And in his dedication to Laurentius, grandson of Cosmus, he calls Galen the physician of the body, and Plato the physician of the soul: and in his book mixes a great deal of the subtilties of Plato and Plotinus, with some useful rules copied mostly from Galen. To these, however, he adds several senseless and superstitious precepts of his own, that still shew the darkeness of the age in which he lived.

1. He admonishes people, for instance, to consult a good astrologer * at every septennial period of their lives, and when they shall learn from him the dangers which hang over their heads, they may then go to the physician to prevent those dangers.

2. He recommends the internal use of gold †, frankincense, and myrrh, to old people, in imitation of the wise men who offered these three to the creator of the stars, in order to obtain from him the benign influence of the three lords of the planets, viz. Sol, Jupiter, and Saturn.

In ‡ the last place, he most absurdly advises old men

* Tu igitur, si vitam producere cupis ad senectutem, quoties septimo cuilibet propinquas anno, consule diligenter astrologum: unde imminet tibi discrimen, ediscito; deinde vel adito medicum, vel prudentiam. De studios. vit. producend. cap. 20.

† Sicut magi thus, aurum, et myrrham, tria dona, pro tribus planetarum dominis, Jove sciz. Sole, et Saturno, stellarum domino obtulerunt, ita senes accipiant eandem vitalia dona. De vit. stud. producend. cap. 21.

‡ Communis quaedam est et vetus opinio, aniculas quaedam fagar, infantum fugere sanguinem; quo pro viribus juvenescant. Cur

men to copy the shocking practice of some withered witches (as fame had reported) to renew their youth and strength.

To Ficinus, who flourished before the year 1470, I shall here subjoin Martin Panfa, a celebrated German physician, tho' he lived about an hundred an fifty years later, to shew that, even then, astrology and superstition were not banished from the faculty. But tho' a great many might be added, who were shamefully weak and credulous upon this article, as well as Panfa, I shall not trouble the reader with any more of their trumpery.

MARTIN dedicated to the senate of Leipzig, anno 1615, a treatise entituled *Aureus libellus de proroganda vita*. He was one of those who thought that the planets had a great influence on health, and that people should be careful to know which aspects and conjunctions of them might be favourable or hurtful to their respective constitutions, and that they should choose such habitations as their stars* directed. He informs us also, that we ought to be particularly mindful of our health every climacterical or seventh year, for which he gravely assigns the following reason, viz. because Saturn, a malignant planet governs every seventh year of our lives; and as he is an enemy to our vital spirits, and ready to introduce some bad change into the

non et nostri senes sanguinem moderatè missum e vena adolescentis sani fugant. De vit. studios. producend. cap. 19.

* Ut ad quamcunque regionem potissimum inhabitandam et curandam tuum sidus te admonuerit, eandem tibi deligendam esse arbitreris. Part. 1. cap. 29.

animi

animal oeconomy, it is our business, by prudence * and art to prevent the danger with which we are menaced.

OUR author however, in other places of his book, makes amends for amusing people with such fancies, by recommending cleanliness in their persons, cloaths, houses, and furniture; because, says he, " nastiness stops the perspiration, breeds vermin, and overspreads the body with the itch, " and other cutaneous eruptions."

ANOTHER of his valuable rules, is, that men of letters should apply themselves to close and serious study only in the morning, but to entertaining books in the afternoon; and that they may indulge their taste for contemplation and reading more in winter than in a hot summer, which wastes their spirits.

HE observes in the third place, that those who gratify a fretful and censorious humour, and are ever ready to find fault †, and think to raise their own reputation by depreciating others, soon consume their vital balsam, and frequently meet with a premature death.

THE next in order of time to Marsilius Ficinus is Antonius Gazius of Padua, whose book *concerning health and long life*, was published an. 1491, by the title of *Corona florida*; but, with the most

* Si quæ vero ex insausis aspectibus pericula impendent, tum est arte et prudentia illa prævenire. Part. 1. cap. 29.

† This disposition to find fault discovers also a poor and low genius, directly opposite to that of Longinus, who declares expressly, that he took no pleasure in the blemishes of any author: *αὐτὸς οὐκ ἠγάπα τὰς κριτικὰς ἀποκρίσεις.* Sect. 33.

diligent search in several libraries, I could not find it.

PLATINA CREMONENSIS addressed a short treatise on health to Cardinal Roverella, *an.* 1529.

He was no physician, but copies principally from Celsus all that he recommends. I mention him here for being the first (to the best of my remembrance) who advises tender people to chew * their food well, if they expect that the stomach should digest it, for how is it possible, says he, "that those who swallow their meat whole, should escape crudities and eruptions?"

C H A P. XIV.

Of Lewis Cornaro and some others, who were so very curious and nice in the care of their health as to weigh their aliment.

AFTER Platina came the celebrated Lewis Cornaro, a noble Venetian, who wrote an excellent treatise in praise of sobriety, from which I have made the following abstract.

THE prevalence of custom, says he, is amazing, and frequently gets the better of our reason. Luxury has gained ground in Italy within my memory, and is now reputed honourable, tho' it has destroyed more people than either the sword or the pestilence.

How many, to my grief, have I seen of my

* Those who have lost their teeth should be careful to have their meat cut very small, in order to facilitate their digestion: and, for the same reason, old people should diminish their solid, and increase their liquid aliment.

friends, men of great capacities and noble dispositions, cut off in the flower of their age by intemperance; who, had they lived, would have been useful to their country, and an ornament to mankind! I myself pursued the same pernicious course, and would have persisted in it, had not my tender constitution, and weak stomach, unable to bear excess, thrown me into colics, pains of my side, touches of the gout, a feverishness and perpetual thirst, which hung about me from the thirty fifth year of my age to the fortieth, in defiance of the various remedies employed to remove them. My physicians observing that all their labour and skill was thrown away upon my infirm constitution, told me frankly that there remained but one remedy more to save my life, and that was a sober and regular diet, which might still restore my health tho' reduced so low; adding, that unless I entered upon it forthwith, I should in a few months put myself out of capacity to receive any benefit from it, and in a few months more I should be dead. Tho' they recommended the same regularity to me some time before to little purpose, yet as I found my complaints increasing upon me, and as I had no inclination to die so soon, I firmly resolved to follow their advice without loss of time. A few days in this regular course convinced me that I had at last found the right road, and a year put an end to all my former complaints, and restored me to a perfect state of health.

To preserve this health, I not only continued my regular diet, which consisted in twelve ounces

of solid food taken every day, including bread, yolks of eggs, flesh, fish, &c. and fourteen ounces of liquids; but I was also careful to avoid heat, cold, fatigue, grief, watchings, and every other excess that might hurt my health. It is true, I could not always escape unlucky accidents, but I found by experience, that they had no very bad effect, where temperance in eating and drinking had been strictly observed. The two following instances confirm this truth: My brother, and some more of my family, who did not lead the same regular life I did, being greatly dejected at a law suit carried on against me, which, had I lost it, might have proved my ruin, fell a sacrifice to their melancholy and intemperance; whereas I, who was principally concerned, enjoyed perfect health all the while, and lived to see my affairs brought to a happy conclusion. I was, at another time, overturned in a chariot, which was dragged by the horses a considerable way, and had my head and whole body much bruised, and one arm and one foot dislocated. My physicians advised bleeding and purging to prevent an inflammation; I told them, that if they would be pleased to reduce my foot and arm, I stood in no need of other helps, having no distempered humours to bring on defluxions. Thus I recovered without any other remedies, to the surprise of all my acquaintance.

ANOTHER truth of great moment I have also learned from experience, viz. that a regular method of living, long persisted in, cannot be altered
without

without extreme danger. It is now four years since my physicians and my family insisted upon my making some small addition to my food, alleging, that as my age was advanced, and my strength impaired, I stood in need of more nourishment to support me. It was in vain to answer that, if my strength was impaired, my digestion by consequence must be weaker, and therefore my food should be rather diminished than increased. My remonstrance was not regarded, and I was forced to yield to their well meant importunities. Accordingly I increased my food to fourteen, and my drink to sixteen ounces; but I had not continued this addition above ten days, when, from being lively and chearful, I began to grow dull, low spirited, uneasy to myself, and troublesome to all about me; on the twelfth day I was seized with a pain in my side, which lasted twenty-two hours, then came on a fever, which continued thirty-five days and nights, so that my life was despaired of. By God's mercy, however, and my old regimen, I recovered, and now at eighty-three I enjoy a vigorous state of body and mind. I mount my horse from the level ground, I climb steep ascents with ease, and have lately wrote a comedy full of innocent mirth and raillery. When I return home, either from private business or from the senate, I have eleven grand-children, with whose education, amusements, and songs, I am greatly delighted; and I frequently sing with them, for my voice is clearer and stronger now than ever it was in my youth. In short, I am in

all respects happy, and quite a stranger to the doleful, morose, dying life of lame, deaf, and blind old age, worn out with intemperance.

It remains only (since a sober regular life is so happy in its consequences) that I exhort and beseech all men of sense and resolution to possess themselves of this source of health, more valuable than all the riches of the universe.

LEONARDUS LESSIUS a learned Jesuit of Louvaine, who lived about the end of the sixteenth century, was so much pleased with Cornaro's treatise on sobriety, that purely to recommend it, he has written a book intitled *Hygiasticon, or The true method of preserving life and health to extreme old age*. In this book he praises a sober life as the principal means of health. By a sober life he understands, that we should neither eat or drink more than what is necessary for our respective constitutions, in order to perform the functions of the mind with ease. Or to be more particular, he says, that the proper measure of meat and drink for every individual, is such a quantity as his stomach will be able to digest perfectly well, and will be sufficient to support him under the employment of body or mind that providence has appointed for him. But to prevent mistakes with regard to what the stomach may be perfectly able to digest, and to what may be thought sufficient to support men under their respective occupations, he recommends the following rules:

First. HE who eats or drinks such a quantity as renders him unfit for any exertion of the mind.

to which his profession calls him, has certainly exceeded, and ought to retrench. And he, who in bodily labour or exercise was active and nimble before meals, if he becomes heavy and dull after meals, has certainly transgressed; for the true end of eating and drinking is to refresh, and not to oppress the body.

Second. THO' there cannot be a certain and invariable measure prescribed to all persons, because of the difference of ages, constitutions, and occupations; yet, generally speaking, to those who are old, or of a tender constitution, and live a sedentary life, twelve, thirteen, or fourteen ounces of solid food, including bread, flesh, fish, and eggs, together with an equal * quantity of drink, will be sufficient. And this rule has been verified by the experience chiefly of those whose proper employment has been study and meditation.

Third rule. THE quality † of people's food and drink is little to be regarded, if it is but plain, and such as common use has recommended, and does not particularly disagree with him who uses it, provided the quantity be properly adjusted.

Fourth rule. To cure you of your fondness for high living, consider these delicacies you sit down to, not as they appear on the table, but as they will be quickly altered after you have eat them; for the richer their flavour and taste is now, the more

* In this he is mistaken, for the quantity of drink should exceed that of the solid food, in almost all circumstances of life.

† This rule is calculated for persons of a strong constitution only, but not for the pany or delicate.

corrupted and acrimonious they will become in your body, and the more hurtful will be their consequences.

OUR author, in the *last* place, proves the advantages of sobriety by the experience of such as made trial of it, some of whom lived in the deserts on bread, dates, fallad, and water, to an hundred years and upwards. Paul, the hermit, says he, died at the age of 115 years; of which he spent near an hundred in the desert, living for the first forty on dates and water only, and for the remaining time on bread and water, as Jerom testifies. St. Anthony lived to 105, of which he passed more than eighty in the wilderness on bread and water, with the addition at last, of a little fallad, according to Athanasius. Arsenius, the preceptor of the emperor Arcadius, lived to 120, of which he spent the first sixty-five in the social world, and the other fifty-five in the desert with great abstemiousness. And Epiphanius lived with equal austerity to almost 115.

BUT the most recent example, and the most to his purpose, was that of Lewis Cornaro, who died at Padua when he was above 100 years old, *anno* 1566.

C H A P. XV.

Of the physicians who wrote on health in the sixteenth century before Sanctorius, viz. Thomas Philologus of Ravenna; Vidus Vidius; Hieronimus Cardanus; Alexander Trajanus Petronius; Levinus Lemnius; Jason Pratensis; Joannes Valverdu de Hamusco; Gulielmus Gratarolus; Henricus Ranzovius; Æmilius Dufus; Ferdinandus Eustachius, and Oddi de Oddis.

THOMAS PHILOLOGUS of Ravenna addressed to pope Julius III. a treatise, "De vita ultra annos 120 protrahenda," which he professes to have collected with great labour and assiduity from the writings of the learned. He complains that voluptuousness and avarice had shortened the lives of the noble Venetians to such a degree, that whereas formerly several senators, every one at least an hundred years old, used to appear on the streets together, venerable by their white locks and rich robes, there was not one to be seen in our author's time who had reached ninety: He therefore recommends temperance and purity of manners as the principal means to promote longevity. He recommends likewise a pure air to those who desire length of days, and is the first physician, I know of, who censures the pernicious custom of having public burying places in populous cities, which taint the atmosphere with cadaverous steams, and frequently occasion fatal distempers. "I am astonished, continues he, that
" the

“ the moderns should approve of a practice, which
 “ the wisest nations of antiquity prohibited by the
 “ most solemn laws.”

ABOUT the middle of the sixteenth century, Vidus Vidius, a Florentine, published a large volume on the preservation of the health of the body in general *, and of every member in particular, cleared (as he pretends) from all the errors both of the Greeks and Arabians. He had been invited to Paris by Francis I. and taught physic there, during the life of that august and munificent patron of learning; and after his death was called home *anno* 1557, and highly encouraged by Cosmus duke of Tuscany.

IN this performance concerning health, Vidius has so closely adhered to the theory of Galen, “ without one instance from his practice to enliven it,” and is so full of the endless distinctions and divisions of Avicenna, that there is not one new or entertaining precept to be met with in his whole work, tho’ he was undoubtedly a man of great literature.

THE famous Hieroninius Cardanus is another of our voluminous writers on the subject of health, but has not added many rules of great importance to those mentioned by former physicians. He was descended from a noble family in Milan, and born at Pavia (whither his mother fled from the plague) *anno* 1500. He is magnified by some for his extensive knowledge in the sciences, and was sent for

* De tuenda valetudine generatim libri sex, membratim libri quatuordecim.

from Italy, as far as Scotland, to cure the archbishop of St. Andrews, which he did, of a dangerous illness: But others hold him in small esteem. His book on health and long life is reckoned one of his best performances; but he is a very unequal writer. He takes upon him to blame Hippocrates and Galen in things wherein all the world think them to be right, except himself. He exclaims, for example, against using any exercise that can fatigue a man in the smallest degree, or throw him into the most gentle sweat, or in the least accelerate his respiration; and gravely observes, that trees live longer than animals, because they never stir from their places: He maintains that Galen's treatise on health is full of mistakes; and as a proof of this, observes, that Galen himself died at seventy seven, which cannot properly be called old age. "Poor Cardan did not then foresee that this objection (suppose it to have any weight) might one day be urged more justly against himself who died at seventy-five."

BUT to do him justice: He was the first who gave us marks or symptoms of longevity, which when they meet in the same person, are, for the most part, true indications of long life, viz. first, to be descended from a long-lived family, at least by one of the parents. Secondly, to be of a chearful easy disposition, undisturbed by any irksome care or disquietude of mind: And, thirdly, to be naturally a long and sound sleeper.

THE quantity of aliment which he recommends is very small, after the manner of Cornaro, whom

he:

he admires much: And though the abstemiousness which he enjoins would ill agree with persons of an active and laborious life, and soon exhaust their strength, and render them useless; yet to people of a delicate constitution, full of care and inquietudes, or confined to a sedentary life, the measure of aliment which he allows, under the restrictions annexed to it, is perhaps the best rule of health in his book.

THE true measure of eating and drinking, says he, is, “ that a man shall feel no fulness or weight
“ in his stomach, but shall be able to walk or
“ write immediately after meals, in case either
“ should be necessary; that his sleep shall not be
“ disturbed or shortened by his supper; that he
“ shall have neither head-ach, nor bad taste in
“ his mouth next morning; and that he shall
“ awake refreshed and chearful after his night’s
“ rest.”

His fourth book on old age is the most entertaining part of the whole performance. Who can forbear being pleased with his chearful and social disposition at seventy-three, and with his lively hope which he stretches beyond the grave? For my part, says he, “ I am more joyful now than
“ ever I was in my youth. I shall die, ’tis true,
“ and leave my friends behind me, but I shall
“ find others where I go, and I know that those
“ who are left behind will quickly follow me.”

SOON after the death of Cardan, Alexander Trajanus Petronius published his book concerning the aliment of the Romans, and the preservation
of

of their health, which he dedicates to Pope Gregory XIII. In it he treats of the situation, air, winds, waters, and healthy seasons of Rome; and also of the food, solemn fasts, and epidemical ailments of the Romans. This book is written with great judgment and accuracy, and is an excellent model for any physician who inclines to do the same good office to the city in which he resides.

SEVERAL Authors, besides those already named, have written upon the conservation of health in the sixteenth century, before the celebrated Sanctorius. I shall mention the most eminent among them, for the sake of the curious, who may have a mind to consult them, but shall not dwell long upon their works; and perhaps there have been but few * improvements or variations in this branch of physic, from the times of the Greeks and Arabians, down to Sanctorius, who flourished in the close of this century.

THESE authors stand in order of time, as follows:

LEVINUS LEMNIUS was born in Zeland *anno* 1505, and practised physic for several years with good success: But having had the misfortune to lose his wife, entered into holy orders; in consequence of which, his writings partake both of morality and physic. His exhortation to lead a virtuous life, in order to secure the health both of

* Les regles, pour la conservation de la santé, et ce qu'il y a à dire sur les qualitez et le choix des alimens, étant un sujet où il y a le moins de variations depuis les tems les plus anciens jusqu' au nostre. Le Clerc Plan de l'histoire de la médecine, pag. 3.

body and mind, sets forth, that "health is pre-
 "served by temperance in eating and drinking,
 "wherein excess is indecent, as well as pernicious;
 "and by a moderation in all the other articles
 "which Galen * calls the preservatives of health,
 "but moderns call the *Six-Non-naturals*, not that
 "they are by any means *unnatural*, but because
 "they are not within the body like our blood and
 "humours, though they have influence enough
 "to hurt or destroy it, when a bad use is made of
 "them."

JASON PRATENSIS a Zeland, likewise wrote
 a treatise *De tuenda sanitate*, anno 1538. He re-
 grets that his many avocations, and a nine month's
 illness did not permit him to write up to the idea
 which he had of his subject. He is, nevertheless,
 a lively writer, and a good classical scholar, which
 makes his book very entertaining, tho' it has little
 or nothing new with respect to health.

ANTONIUS FUMANELLUS VERONENSIS wrote
De senum regimine, anno 1540; wherein he de-
 clares, "that he follows the sentiments of Hip-
 "pocrates and Galen."

JOANNES VALVERDUS de HAMUSCO, a Spa-
 niard, published his treatise *De animi et corporis
 sanitate ad Hieronimum Verallum Cardinalem*, anno
 1552. It is short, but written with a great deal
 of good sense; and as the author had an opportu-
 nity of travelling into distant countries, his obser-
 vations enabled him to add this new rule to the old

* Lemnius did not advert, that Galen was himself the person
 who introduced the appellation *Non-natural*.

ones, viz. That it is necessary to diversify our method of living, according to the nature of the climate in which we may chance to reside. "When I was in Scotland * (says he) I could not forbear eating more frequently than I used to do in my own country."

GUILIELMUS GRATAROLUS a Piedmontese, published his book *De literatorum, et eorum quæ magistratum gerunt, conservanda valetudine*, anno 1555. He inculcates a moderation in the five following articles; namely, eating, drinking, labour, sleep, and concubinage; and affirms, that those great fathers of physick, Hippocrates and Galen, have recommended the same moderation, as the principal means to secure health.

HENRICUS RANZOVIUS, a Danish nobleman, wrote *De conservanda valetudine in privatum liberorum suorum usum*, anno 1573. The first and most valuable precept in his book, is, to worship and serve God, and to pray to him for health; "for" (continues he) tho' the stars have their influence, "it will be always true, that

Astra valent aliquid, plus p' a vota valent

ÆMILIUS DUSUS composed his book *De tuenda valetudine ad Carolum Sabaudicæ Ducem*, anno 1582; but copies Galen in every thing that is material.

Lastly, **FERDINANDUS EUSTÆCHIUS**, son to the famous anatomist Bartholomæus Eustachius,

* Cum ego, qui meridionalem magis incolo regionem, apud Scotos agerem, non poteram me continere, quin pluribus vicibus sum assumerem, quam antea esset consuetus.

wrote

wrote *De vitæ humanæ a facultate medica prorogatione*, dedicated to pope Sixtus V. anno 1589. This author has indeed refuted many arguments alledged to prove that the medical art is of no use in prolonging life; but is quite silent as to the means by which that end may be attained.

It would make this compilation too tedious to take notice here of all these authors that have advanced some fanciful speculations on the different proportions of food at different meals, which they imagined to be of great importance to health; such, for instance, as Oddi de Oddis, who, in his treatise *De cœnæ et prandii portione*, published anno 1570, asserts that people should make supper their fullest, and dinner their lightest meal.

G H A P. XVI.

Of Sanctorius—His useful discovery of insensible perspiration, and observations upon it.—Of those physicians who adapted his method to their respective climates, as Dodart in France; Keil in Britain, De Gorter in Holland, Rogers and Robinson, in Ireland, and Linen in Carolina.—Of their aphorisms.—Of the inhalation of moisture from the air, where mention is made of Doctor Jones.

SANCTORIUS SANCTORIUS was born in Istria, a territory in Italy belonging to the Venetians, and studied at Padua, where he afterwards became a celebrated professor. He was from thence invited to practise physic at Venice,

for the benefit of the citizens; and tho' he left the university, yet the republic, as a mark of esteem, continued his salary to his death, which happened *anno* 1636, in the 75th year of his age.

He opened a new scene in physic, to which physicians and philosophers were in a great measure strangers before his time; and, upon experiments made with amazing diligence and assiduity for thirty years, has established several laws of *insensible perspiration*, or aphorisms, of which some are so useful toward the preservation of health, that it will be necessary to take notice of them; distinguishing, at the same time, and selecting such as are founded in nature and confirmed by experience, from those which were apparently suggested by the false theory of physic that still prevailed in his days. And it will be no incurious entertainment to compare his experiments made *by weighing the body*, with the observations of the antients made on *temperance* and *exercise*, and to mark the harmony which subsists between them. Both have, by different means, established the same maxims for the conservation of health, so that his experiments and their observations mutually illustrate and confirm each other.

THAT Galen was acquainted with the insensible perspiration in general, is evident from his own words: "This excrementitious vapour *," "says he, is expelled through small orifices," "which the Greeks call pores, dispersed all over" "the body, and especially over the skin, partly

* De sanit. tuend. lib. 2. cap. 12. sub. finem.

“ by sweat, and partly by insensible perspiration, (*ἀδελος αἰσθησι διακίνησι*) which escapes the sight, and is known to few.” And all the physicians from his time down to the close of the sixteenth century, had only a general and vague idea of transpiration, and may be said to have just known that there was such a discharge. But to Sanctorius was reserved the honour of calculating the true quantity of this perspiration by the balance; of shewing that it is larger than all the sensible evacuations taken together; and of settling rules by which it may be rendered highly subservient to health.

As the difference of climates makes a considerable difference in the quantity of perspiration, physicians of several countries have thought it worth while to repeat the statical experiments which Sanctorius made, in order to compare the sensible and insensible evacuations of the human body in their respective climates with those in Italy.

THE first was doctor Dodart in France, a learned, inquisitive and conscientious physician, who began his experiments *anno* 1668, and continued them with little interruption for thirty-three years.

THE next was the ingenious Dr. James Keil in Great Britain, who, *anno* 1718, published his tables of observations, made without any interruption for one whole year; together with several

* Hist. de l'acad. des sciences, *anno* 1707. Eloge de M. Dodart.
NOTE, His *medicina Stat. Gallic.* is printed with Noguez's explanation of Sanctorius's aphorisms.

trials which he had made at different times, during the ten preceding years.

AFTER him came De Gorter in Holland, who printed the first edition of his book, concerning insensible perspiration, *anno* 1728, and his second edition *anno* 1736. From Keil and De Gorter, both men of a clear mathematical discernment, we learn to correct the calculations of Sanctorius, which otherwise might mislead the inhabitants of a colder region. And indeed De Gorter, (under the direction of Boerhaave) by his experiments and judicious reflections, has thrown a great deal of light upon this subject.

THEN came out the performance of a curious gentleman in Ireland, who having read Dr. Lister's Sanctorius; and having afterwards found that Keil, in his treatise on perspiration, made the insensible discharge in Britain, much less than that in Italy, resolved to go himself through a course of statical experiments for one year; and in his letter to Dr. Rogers very modestly says, "some irregular observations, from the 20th November 1720, to the 1st of May 1721, I made scarce worth mentioning; but afterwards I formed tables something more regular. If I had thought that they should be made public, I had been more careful and correct."

In another paragraph he says, "not having sufficient room in the space of a quarter of a sheet, I was obliged to leave out entirely those which treated of diet and exercise, and even those of stools, except for two months."

" THIS

THIS performance appeared first with Dr. Rogers's ingenious "essay on epidemical diseases, anno 1734." And tho' the author of the experiments had such an humble opinion of his own performance: Yet in the doctor's hands it became a finished piece, which, as he says, "brings the statical medicine to as great a certainty in Ireland, as it ever arrived to in Italy, under the laborious endeavours of the most experienced Sanctorius." This is very wonderful, considering that the *Irish Country Gentleman* employed fewer months in making his experiments, than the *Italian physician* did years. But be that as it will, the learned gentleman's experiments and notes, and the subsequent aphoristical rules (from whatever source they were drawn) are both ingenious and useful. We have, in the ninth * volume of the philosophical transactions, Dr. John Linnæus's statical experiments, made at Charlestown in South Carolina for one whole year, from March 1740 to March 1741, with the laudable view of finding out the cause of the *epidemic distempers*, which return regularly in that country at *static seasons*. But general tables, made in a very different climate, without any aphorisms drawn from them, cannot contribute much to the preservation of health in this country.

THE last performance relating to statical experiments, that has come to my hands, is doctor

* The origin. transact. and not the abridgments.

Bryan Robinson's dissertation on *the food and discharges of the human body*, published anno 1748: But his numerous calculations, and refined manner of reasoning, are above the comprehension of common readers, and consequently do not correspond well with my present purpose. To give a specimen of the latter; in page 77, he expresses himself in the following words, "anger and joy increase, and fear and sadness lessen, both perspiration and urine. The soul which has great power over the body, by virtue of the æther, when it is made uneasy by the passion of anger, raises a strong vibrating motion in the æther, within its sensorium, which motion is propagated thro' the nerves to all parts of the body."

BUT to return to Sanctorius. This physician has divided his book of aphorisms into seven sections. In the first he makes some general observations on weighing the insensible perspiration: In the second he treats of air and water: In the third, of meat and drink: In the fourth, of sleep and wakefulness: In the fifth, of exercise and rest: In the sixth, of concubinage; and in the seventh, of the passions and affections of the mind.

I shall transcribe promiscuously from Sanctorius, and the other authors on statical experiments above mentioned, such maxims as conduce most to the preservation of health; and shall range them under their respective sections, according to the method of Sanctorius.

SECTION I. Of weighing the insensible Perspiration.

1. **INSENSIBLE** perspiration, by the pores of the skin, and by the breath, is greater than all the sensible evacuations joined together; for, if a strong healthy man, who uses moderate exercise, in good weather, eats and drinks eight pound weight in a day, he will discharge five of them by insensible perspiration; and we are more relieved by a free insensible perspiration, than by all the sensible evacuations united.

2. **HEALTH** continues firm as long as the body returns daily to the same weight by insensible perspiration: it begins to decline when the body is reduced to the same weight by a larger discharge of stool or urine than usual; but if the body does not recover the same weight in some days, either by insensible perspiration, or by some sensible evacuation, the approach of a fever, or some bad state of health, is to be apprehended.

3. **THE** purer our perspiration is, or the less mingled with any sensible moisture, the more wholesome it is.

4. **To** feel the body heavy, when it is actually light on the balance, shews a worse state of health, than to feel it weighty when it is really so. On the other hand, to feel it light when it is really heavy on the balance, shews an excellent state of health.

5. **PAIN** of the head, or of any other part of the body, diminishes the perspiration.

6. It

6. IT is a sure sign of good health when a person can climb up an ascent with pleasure.

7. LENTENT gentle purges do not lessen the perspiration, but only discharge an useless load; whereas strong purges hinder it, and are hurtful in many respects.

8. THE bodies of young healthy men, who live moderately, grow weightier every month, by two or three pounds, and sometimes, towards the end of the month, they feel a weight in their heads, or a weariness; but soon return to their usual standard again, by a discharge of turbid urine, or some other evacuation.

9. THE principal causes which stop perspiration are, a cold damp air; hard viscid food; disuse of exercise; fasting; terror; restless nights; and an increase of any sensible evacuation.

10. THERE is a great deal more perspired in youth than in old age; and the quantity of perspiration differs according to different constitutions, ways of living, climates and seasons.

11. A very material question follows, *viz.* How shall a man fix upon the precise quantity of perspiration, which will secure to him a permanent state of good health to old age? Sanctorius says, that he may secure it by the following experiment.

LET him, after a plentiful supper, compute how much he has discharged by insensible perspiration in the space of twelve hours: Suppose, for example, that he has lost fifty ounces; let him again weigh himself some morning, after having taken no supper at all, nor committed any excess

in his preceding dinner; and then calculate how much he has thrown off by insensible perspiration; suppose twenty ounces. This being known, let him chuse such a diet, and use such exercise, and such a moderation in the other *Non-naturals*, as will bring his insensible perspiration to a medium between fifty and twenty ounces, *i. e.* to thirty-five ounces every day, and by this method he may preserve his health to an hundred years. “ But
 “ this is a tedious method, which no man will
 “ submit to, and it is plain the author himself did
 “ not; for he died in the 75th year of his age.”

KEILL says that the true rule of diet to every man, is his natural undepraved appetite. By this monitor he is directed, without the trouble of weighing himself, to the exact quantity of meat and drink which he ought to take in; for nature never craves more, nor is easy with less, than what is proper for her.

DE GORTER, in answer to this question, says,
 “ I have found, by repeated trials with the ba-
 “ lance, that if a healthy man eats and drinks as
 “ much as is sufficient to satisfy his hunger and
 “ thirst; and rises from table without quite filling
 “ his stomach, or, with some remaining appetite,
 “ his daily discharges will be equal to what he has
 “ taken in; or, in other words, he will enjoy a
 “ good state of health; because health principally
 “ depends upon such an equality.

“ In order therefore to secure a constant state
 “ of good health, continues he, a man should be
 “ careful to use such exercise, and such a moder-
 “ ation

“ ation in the other means of life, as will excite
 “ this natural appetite of hunger and thirst every
 “ day; and then should satisfy it with plain whole-
 “ some meat and drink in the temperate method
 “ above recommended.”

THIS is the proper answer to the question of Sanctorius, which every man's own experience may verify with little trouble.

SECT. II. Of Air and Water.

1. IN a cold, pure, healthy air, the perspiration is indeed obstructed; but the fibres are strengthened, and the matter retained is neither dangerous nor painful; whereas, in a damp impure air, the perspiration is stopped, the fibres relaxed but not strengthened, and the matter retained is both bad and troublesome.

2. THE perspiration is obstructed by any air which is too cold, too moist, or very tempestuous.

3. THE air of a city is generally worse than that of the country, being grosser, from the steams of the inhabitants; and more apt to pall the appetite.

4. COLD air, and a cold bath, warm robust bodies, and make them feel lighter to themselves; but infirm bodies feel themselves colder and heavier from them; and the more suddenly the cold comes, the more it hurts.

5. A cool and pleasant gale does more hurt to bodies overheated, than either air, or water extremely

remely cold; for the former obstructs and relaxes, which makes the body heavy; whereas the latter, tho' it obstructs for a while, yet strengthens at the same time, and soon makes the body feel lighter.

6. **SWIMMING** in cold water, after violent exercise, is pleasant but pernicious.

7. **FANNING** stops the perspiration, and makes the head hot and heavy.

8. **CONTINUAL** rain is more unwholesome than continued dry weather, because it makes the body heavier.

9. A man is more apt to complain of weariness in summer than in winter, not from any greater weight of his body, (which by the balance is about three pound lighter) but because his fibres are relaxed, and weaker in a warm air.

10. **STRONG** people perspire most in the summer days, and in the winter nights; and an obstructed perspiration which disposes the body to a malignant fever in summer, does little harm in winter, because the perspirable matter is more acrid in hot weather than in cold.

11. **OF** all the seasons, the autumn is the most unhealthy, because the perspirable fluid is both obstructed, and apt to grow putrid; but it cannot hurt him whom the coldness of that season shall find well clothed; who uses a proper diet; and whose body consequently continues nearly of the same weight as before.

12. **THOSE** who lay aside their winter garments too early in the spring; and put them on

too late in autumn; will often have fevers in summer, and defluxions in winter.

SECT. III. Of Meat and Drink.

1. THE body perspires little, while the stomach is too full, or quite empty.

2. A full diet is hurtful to those who use very little exercise, but indispensably necessary to such as use a great deal of exercise which is not violent.

3. IF you know what quantity * of food you ought to take daily, and can adjust your exercise to it, you know how to preserve your health to old age.

4. THAT sort of food, of which the weight is not felt in the stomach, nourishes best and perspires most freely. And that quantity is most wholesome, which, after meals, leaves the body as nimble and active as if one had eat nothing.

5. HE who, being hungry, goes to bed without any supper, will perspire but little. And if he does so frequently, will be apt to fall into a fever.

6. THE flesh of young animals; and good mutton; and wheat bread properly leavened, or mixt with a due quantity of barm and salt, and well baked; are excellent sorts of food, light and easy of digestion.

7. THE body feels heavier after four ounces of any strong food that nourishes much, such as

* This aphorism, and several more, are borrowed from Hippocrates.

pork, eel, or any fat flesh or fish, than after six of food that affords but little nourishment, as tender fresh fish, chickens, and small birds; for where the digestion is difficult, the perspiration is slow.

8. UNUSUAL fasting renders the body too light, and frequently repeated brings on a bad state of health.

9. THE body becomes more heavy and uneasy after six pounds taken in at one meal, than after eight taken at three meals; and he destroys himself by degrees who makes but one meal in the day, let him eat much or little.

10. He who eats more than he can digest, is nourished less than he ought to be, and consequently emaciated.

11. To eat immediately after any immoderate exercise of body or mind is bad; for a body fatigued perspires little.

12. EVERY body has its particular latitude, that is, its vessels may be stretched to a certain degree, and yet restore themselves. Four pounds of meat and drink are as much, or more than some constitutions can well bear; whereas others can take in eight pounds without any inconvenience.

13. A MAN'S common diluting drink at meals should be double the quantity of the solid food he eats.

14. GOOD wine, moderately drank, assists digestion, and increases the perspiration.

15. THE perspiration is as large from a good fire in winter, as from the sun in summer.

SECT. IV. Of Sleep and Wakefulness.

1. SANCTORIUS asserts, that strong healthy persons often perspire fifty ounces in seven hours of sound sleep, and, generally, double the quantity of what they perspire in the same number of hours when awake. But by Keil's tables, and De Gorter's reiterated experiments, it is evident that our nocturnal perspiration rarely rises to sixteen ounces; and that in England and Holland, men perspire more in the day than in the night. "We find, however, notwithstanding this great difference in the quantity perspired in different climates, that sound sleep is equally refreshing in all countries; and that it not only promotes the nocturnal perspiration, which would be much less in a wakeful state, but likewise greatly increases our strength and spirits."

2. AFTER a good night's sleep, the body feels lighter, both from the increase of strength which it receives, and from the quantity of matter which it throws off.

3. THOSE accidents which prevent sleep, are found also to obstruct the perspiration, which is much diminished by a restless night.

4. THE perspiration is obstructed more by a cool southerly air when we are asleep, than by any intense cold when we are awake.

5. A CHANGE of bed commonly diminishes the perspiration; for things which we are not ac-

customed to, tho' perhaps better in their own nature, seldom agree with us.

6. **STRETCHING** and yawning after sleep increase the perspiration.

7. **THE** perspiration being copious in time of sleep, and hindered from flying off by the bed-clothes, sick persons communicate their distempers to the healthy who lye with them: and even the healthy infect the healthy with any bad humours which they have about them.

8. **WE** know that we have slept sufficiently, when in the morning we find our understanding clear, and our body active and lively.

9. **BY** too much sleep the body becomes cold, dull and heavy.

10. **THE** perspiration is obstructed more, and we catch cold much sooner by throwing off our blankets in our sleep, than by throwing off our clothes when we are awake.

11. **A** moderate glass of good wine induces sleep, and increases the perspiration, but drank to excess, lessens both.

SECT. V. Of Exercise and Rest.

1. **THE** body perspires much more when it lies quiet in bed, than when it tosses and tumbles there.

2. **By** moderate exercise the whole body becomes lighter and more lively: the muscles and ligaments are cleansed from every foulness, and the matter to be discharged by perspiration is prepared for it.

healthful, and dispose the body to a free perspiration.

9. MODERATE dancing promotes perspiration, and is a healthful exercise.

10. THE principal and most useful sorts of exercise within doors are tennis, hand-ball, dumb-bell, dancing, fencing, and shuttle-cock *. The best without doors are walking, bowling, riding † in wheel machines or on horseback.

11. WHEN the perspiration is defective, the remedy is exercise.

SECT. VI. Of Concubinage.

1. BOTH extremes of excess and abstinence obstruct the perspiration; but much more excess.

2. BY excess the stomach is weakened, the natural heat diminished, and the perspiration obstructed; whence follow indigestion, flatulencies, palpitations at the heart, gravel in the kidneys, catarrhs, and loss of memory.

3. EXCESS is more pernicious in summer than in winter, because the digestion being weaker in that season, is more difficult to be recovered, and the perspiration being more free, any stoppage of it is sooner felt.

4. NEXT to the stomach, the eyes suffer most by this excess, which is very apt to bring a Gutta Serena.

* To which should be added (especially where a good digestion is wanted) a chamber-horse or tremoussoir.

† The golf also should be practised, where a proper field or lawn can be met with at a reasonable distance.

5. ONE knows that concubinage has done no hurt, when after a subsequent sleep no languors or weariness are felt, but the breath is free and easy, the urine of a good colour and consistence, and the whole man brisk and lively.

6. OLD men are destroyed by indulgences of this kind, which render them heavier, weaker, and colder.

SECT. VII. Of the Passions.

1. AMONG the passions, anger and joy increase the perspiration, but fear and grief diminish it; and the other passions have the same effects in proportion as they partake of the opposite natures of those mentioned.

2. HENCE timorous and melancholic persons are subject to obstructions in the bowels, to hard tumours in several parts of the body, to hypochondriacal disorders, and to profuse cold sweats; for nothing makes the perspiration more languid than fear and grief, and nothing makes it more free than cheerfulness of spirit.

3. THE distempers which arise from the affections of the mind, are not conquered by medicines, but by contrary affections; tho' proper medicines, to promote or diminish the perspiration, may be of some service at the same time.

4. MODERATE joy discharges only what is superfluous by perspiration; but immoderate, and sometimes sudden joy, discharges also what is useful; and, if it continues long, prevents sleep and dissipates the strength.

5. FOOD

5. **FOOD** of easy digestion, which increases the perspiration, causes chearfulness; but that which is hard to digest and lessens perspiration, causes melancholy.

6. **THOSE** who perspire too much, and waste themselves through the violence of passion, do not recover their former healthy state so easily as those who perspire too much from strong exercise.

7. **THOSE** who are eager to win at play ought to play but seldom; for if they win frequently, their joy will not let them sleep, which impairs their health; and if they lose often, their grief will obstruct the perspiration.

8. A moderate victory conduces more to health than a glorious one; for every extreme is an enemy to nature.

9. **ANY** violent affection of the mind is more hurtful to health, than any violent motion of the body.

10. To vary our passions, *i. e.* To be sometimes angry or chearful, and sometimes fearful or sad, produces, upon the whole a more healthful sort of perspiration, than to be always under the influence of the passion, tho' ever so agreeable.

11. **HENCE** a man can pursue any study better under a variety of different passions, than under the continuance of one, or without any passion at all. A man, for example, cannot pursue any business above one hour, if no passion engages him in it; or, if he is engaged by one passion only, he cannot attend to it closely above four hours; but under a rotation of passions, as at games of hazard, where

where joy for gain is interchanged with grief for loss, a man may hold out many hours.

HAVING thus seen that a large stream of subtile vapours perpetually flows from the human body, it will be proper, on the other hand, to know that there is a new supply of moisture constantly attracted from the air, which, if moderate, is of great use towards the preservation of health, by keeping all the parts of the body soft, pliant, and fit for motion. This attraction helps us to explain why the quantity of perspiration should, from the greater moisture of the air, be less in winter than in summer; in rainy weather than in dry; and in the night than in the day. From it also we learn the necessity of living in a clean house, and in a pure dry air, and of covering our bodies well in the night, in order to enjoy a comfortable state of health.

OUR inhalation from the circumambient air is very considerable, as we see by Keil's observations on his fourth table, which shew that in one night, while he was asleep, his body had attracted eighteen ounces of moisture. It was likewise observed by Dr. Einin, upon a change of weather from clear and dry to moist and cloudy, that the inspiration exceeded the perspiration. And Dr. Robinson found, upon the like alteration of weather, that his body grew more weighty, tho' he had taken less aliment.

BUT the most valuable treatise I have seen upon this subject, is the inaugural dissertation of Dr. Jones on the resorbent veins that accompany and correspond

correspond with the numberless arteries through which the perspiration is discharged. This physician had his education in the university of Edinburgh, and his first essay plainly shews what extraordinary advances an ingenious young man may make there, as well in the curious as in the useful branches of physic. And indeed, considering the great endowments of the present professors, their assiduous attention to their respective departments, and the advantage of a magnificent infirmary, where, in the presence of the students, physic and surgery are practised with uncommon success, and the reason of that practice explained from the nature and construction of the human body; I may venture to say that, *for medical knowledge*, the university of Edinburgh, is not inferior to any in Europe.

C H A P. XVII.

Of foreign writers concerning health after Sanctorius, viz. Roder. a Fonseca, Aurel. Anselmus, Franc. Ranchinus, Rodolph. Goelenius, Joan. Johnstonus, Petrus Lotichius and Bernardin Ramazzini.

THE human body, having been originally contrived with infinite wisdom, performed its functions perfectly * well at all times, by means of those materials and movements with which it was furnished by the hand of the creator, tho' man was ignorant of the mechanism by which his

* A nullo quidem edocta natura, citraque disciplinam ea que conveniunt efficit. Hipp. de morb. vulg. lib. 6. sect. 5. spher. 2.

own actions were directed, and many ages had elapsed before physicians could give any rational account of the animal oeconomy.

It is true that Hippocrates, Galen, and others among the ancients, by diligently observing the operations of nature, and following her steps, have given us excellent practical rules concerning health; but their knowledge of the animal machine was defective, and their reasoning obscure.

THE nature and quantity of insensible perspiration, discovered by Sanctorius, opened to physicians a much clearer view into the reasons and grounds of the rules of health established by the ancients than they had before.

BUT after Harvey published his glorious discovery of the circulation of the blood about the year 1628, a flood of light (if I may use that expression) was poured upon the animal oeconomy, which at once dispelled the darkness wherein it was before involved, demonstrated the wonderful wisdom of God in the construction of our frame, and established a new and rational theory in physic, worthy of the human intellect. This discovery proved evidently from the mechanism of the body, that the rules of health, built upon the observation of the ancients, and the experiments of Sanctorius, were rational and well founded; and every man that understood the structure of his own body, was convinced of the expediency of observing them.

THUS the theory of health was greatly improved by the knowledge of the circulation, but the

the practical rules for preserving health underwent few alterations, having been founded in nature, and confirmed by the experience of ages long before that discovery.

I shall touch very lightly on some of the foreign authors who have treated of health in the seventeenth and eighteenth centuries, and then take notice of the British writers upon the same subject.

AND here it is necessary to remark that several authors, who make no extraordinary figure in a *history of health*, because they added few, or perhaps no new rules to those established by their predecessors, are nevertheless very valuable, considered singly, and may be of great utility to those who read them, by exhibiting a plain and effectual method to secure a sound constitution. For it is surely of small importance to such as value health, and are willing to observe the precepts that lead to it, whether these precepts are old or new, provided they be clear and pertinent.

RODERICUS A FONSECA, a Portuguese of Lisbon, principal professor of physic in the university of Pisa, and afterwards of Padua, published, *anno 1602*; a treatise *De tuenda valetudine et producenda vita, ad Ferdinandum Medicem magnum Hetruriæ ducem*; in which he proposes to conduct the infirm as well as the robust to a healthy old age. He declares that he collected his rules from the Greeks and the Arabians, but more particularly from Galen's six books of preserving health. The six things necessary to human life

are by him called the *six instruments* * by which health is maintained. He was undoubtedly a man of learning and good sense, and has made a judicious collection of useful precepts from the antients.

AURELIUS ANSELMUS of Mantua published his *Gerocomica sive de senum regimine, anno 1606*. He was chief physician to the duke of Mantua, tho' but a young man, and declares that he writes concerning old age, because it is the only period of life in which a man may be properly said to live, as it excels all other periods in understanding and prudence. "Old people are much obliged to him for his good opinion of them; but it is obvious that his rules to direct them must be grounded upon the experience of others." To him shall be subjoined,

FRANCISCUS RANCHINUS, professor at Montpellier, who also published a *Gerocomicé de senum conservatione, et senilium morborum curatione, anno 1625*. It is a very judicious performance, and shews the author to have been a man of erudition and good understanding.

RODOLPHUS GOELENUS, a German physician, dedicated a treatise *De vita proroganda* to Frederic count Palatine of the Rhine, and Otho Landgrave of Hesse, *anno 1608*. He collected his materials from several historians, philosophers, and physicians, antient and modern; and has illustrated

* Instrumenta illa, cum quibus servatur sanitas, diligenter explicanda sunt: hæc vero sunt numero sex, aer, cibus potus, &c.

his medical precepts with historical facts, which renders them both useful and entertaining.

CLAUDIUS DEODATUS, physician to the bishop of Basil, published, anno 1628, his *Pantheon Hygiasticon Hippocraticum Hermeticum, de hominis vita ad centum et viginti annos salubriter producenda*. But notwithstanding the great expectation which he raises by this high title, his book (full of the vain boasts of the chymists) is calculated rather to obtrude particular *nostrums*, than to give prudent rules for the government of health.

JOHANNES JONSTONUS, a Polish * physician of good reputation, addressed to a nobleman of that country a treatise called *Idea Hygieines recensita*, anno 1661. He discourses of the *six instruments* of health, and recites the common rules in a neat Roman stile.

SOME authors of this period have taken the trouble to write against particular sorts of food in common use. To give but one instance, Joannes Petrus Lotichius published a dissertation against cheese, anno 1643, entitled *Traſſatus medicus philologicus novus de casei nequitia*, which seems to be rather ludicrous than serious or valuable.

I shall take notice of one foreign performance more, concerning health, because it is somewhat different from any that we have hitherto mentioned.

* I thought, by his name, that he was a Scotch man, but found my mistake in the following paragraph: "Non ingrati tibi et reliquæ nobilitati futurum, si me patris lacibus restituerem, reddidit tandem, per Sueci regis mortem, pace."

IN the year 1710, Bernardin Ramazzini, principal professor of physic in the university of Padua, published a book, for the use of Raynald duke of Modena, entitled *De principum valetudine tuenda commentatio*. The health of a good prince, says he, is the greatest blessing imaginable to the public. And this he confirms by the example of the Romans, who fell into the utmost grief and consternation upon hearing that Germanicus was dangerously ill at Antioch; and presently, upon a sudden report that he grew better, ran with excess of joy into the capitol, bursting the doors and crying out, *Rome is safe, our country is happy, Germanicus lives!* But soon after, when they were assured that he was dead, gave way to their fury, broke down the temples of the Gods, overturned their altars, and threw the guardian Deities of Rome into the streets.

A prince who regards his health, continues he, should permit his physician to remind him of the following particulars:

1. HE should be put in mind of the annual changes of the seasons, that his cloaths, palace, furniture, and method of living may be adapted to them.

2. HE should be advertised when any epidemical distemper begins to spread, that he may remove into a more healthy air.

3. As the variety of delicacies, which cover the tables of princes, is a great temptation to excess, they should be exhorted to partake of a moderate quantity of such things only as they know by experience to agree with their constitution.

4. PRINCES:

4. PRINCES should not be fatigued with business soon after dinner, nor with any business at all after supper, but should follow the example of Augustus Cæsar, who would neither read nor write letters after supper, lest they should disturb his sleep.

5. IT is shameful in a prince to be a drunkard, and thereby become the object of the mob; as Claudius Tiberius Nero was in derision called *Caldius Bibicus Mæta*. It is also to be avoided, as Titus Mimatæ Julius Cæsar, who, (as Suetonius says) *wini parcissimus fuit*; and Augustus, who would not drink above three glasses after supper.

6. MANY pleasures are suitable to their high rank, according to the custom of the country, and especially riding, and hunting, should be recommended to them. Princes should also indulge themselves in other honest and genteel recreations, and never fail to permit young people to partake of their diversions.

7. THE constitution of the prince should be carefully studied, and well understood by his physician; and his diet, exercise, and evacuations ought to be regulated accordingly.

8. No man is ignorant of the bad effects which violent passions produce in the human body. Anger, fear, grief, and even excessive joy, have been the causes of death to many. And princes are so far from having any right of exemption from these passions, that they are generally more exposed to them than any of their subjects. " Let a man read (says

" our

“ our author) the forty-fifth * chapter of the fiftieth book of Pliny’s natural history, and when he has considered the many misfortunes, dangers, terrours, and real calamities which Augustus encountered, let him honestly declare whether or not he envies that exalted ruler of the world.” It should therefore be the physician’s study to know what passions his prince is most prone to, that, in the favourable moments of good humour, he may respectfully recommend a diet and regimen proper to subdue those enormities.

C H A P. XVIII.

Of the British writers on health, viz. Sir Thomas Elliot, Thomas Morgan, Edmund Hollyngs, William Vaughan, Thomas Venner, Andrew Boorde, Edward Maynwaring, Thomas Pkayer, William Buleyn, Francis Fuller, Dr. Wainwright, Dr. Welsted, Dr. Burton, Dr. Arbutnot, Dr. Lynche, and Dr. Mead.

IN the reign of Henry VIII. Sir Thomas Elliot, a learned knight, wrote a treatise, which he calls *The castle of health*. He was not bred a phy-

* Pliny there mentions the vexations Augustus met with from his worthless associates, Lepidus and Mark Antony. The necessity of concealing himself for three days in a ditch, after a defeat. Seditions and mutinies in the army. Hatred of banished citizens. Snares laid to take his life away. Treachery and wickedness of his own family and friends. Pestilence and famine in Italy. A fixed resolution to die, in consequence of which he fasted four days, whereby he was brought to death’s door. And, at last, the mortification of leaving the son of his enemy his heir, and successor to the empire.

sician *, but was undoubtedly acquainted with some of their best books. He explains and recommends the precepts of Diocles to king Antigonus; and has judiciously collected several useful rules of health from the ancients. He was so great an admirer of Galen, that (according to the taste of those times) he has followed him close through his perplexed distinction of things into *natural*, *non-natural*, and *contrary to nature*; and has illustrated every branch of that fantastical division. He has also interspersed some prudent remarks of his own. He observes, for instance, that moderation in sleep must be measured by health, sickness, age, constitution, fullness, and emptiness, since each of these requires a different proportion of rest. And speaking of the passions, he says, “ if they be immoderate, they do not only annoy the body and shorten life, but also impair, and sometimes utterly destroy a man’s estimation.”

THOMAS MORGAN published his *Haven of health* about the close of the sixteenth century. He had his education at Oxford, but seems not to have been a regular † physician. His rules of health are taken for the most part from Hippocrates and Ga-

* “ Altho’ I have never been at Montpelier, Padua, or Salerno, says Sir Thomas, yet I have something in physic whereby I have taken no little profit concerning mine own health. If the physicians be angry that I have written physic in English, let them remember that the Greeks wrote in Greek, the Romans in Latin, and the Arabians in Arabic. Nor have I written for glory, reward, or promotion, God is my judge.”

† Speaking of the black affizes at Oxford, which happened in July 1577. It is my opinion, says he, that “ this disease (be it spoken without offence of the learned physicians) was a *febris ardens*.”

len, especially from the latter. He treats of exercise particularly, in a concise and masterly manner, blending his own observations with the precepts of the ancients.

As “ flowing water (says he) does not corrupt,
 “ but that which standeth still; even so animal bo-
 “ dies exercised, are for the greatest part healthful;
 “ and such as be idle are subject to sickness. Some
 “ exercises are appropriated to different parts of
 “ the human body; as running and walking for
 “ the legs and thighs; shooting with bows and ar-
 “ rows for the arms; stooping and rising at bowls
 “ for the back and loins; singing, and reading
 “ aloud for the lungs. The muscles are exercised
 “ by all their respective motions, and so are the
 “ veins and arteries which run through them. Ges-
 “ tation is also excellent, especially for the tender.
 “ But tennis is preferable to every other exercise,
 “ because it may be used by all, and at a small
 “ charge, and principally, because it exercises every
 “ part of the body, as head, eyes, neck, back,
 “ loins, arms, and legs, and at the same time de-
 “ lights the mind; all which advantages can be
 “ found in no other exercise whatsoever. Where-
 “ fore the founders of colleges are highly to be
 “ praised, who have erected tennis courts for the
 “ exercise of their scholars. But let them follow the
 “ prudent rule of Hippocrates, by using exercise
 “ before meals; for it is hurtful immediately after
 “ a full meal, tho’ that is the common practice in
 “ schools and colleges, which makes lads break
 “ out into cutaneous eruptions, and boils.”

THE exercise of the mind is likewise necessary to the health.

To watch and study at night is to strive against nature, and by contrary motions to impair the vigour both of body and mind. “ Alfred, (continues our author) who founded University College in Oxford, divided his time nobly, spending eight hours of the four and twenty in eating, drinking, and sleeping: eight in hearing and deciding causes; and eight in study.” I shall mention but one more of his observations, *viz.* As suck is to infants, so is wine, moderately drank, to the aged, and is therefore called old men’s milk.

OUR next treatise is, *Edmundi Hollyngi, Eboraceni Angli, doctoris medici et professoris Ingolstadiani, de salubri studiosorum victu, hoc est, de literatorum omnium valetudine conservandâ, vitâque diutissimè producenda, libellus*, published anno 1602, and dedicated to Maximilian Count Palatine of the Rhine, and duke of both the Bavarias, to whom he was recommended by cardinal Alan*. He writes, in a concise and elegant manner, of air, aliment, exercise, &c. “ those six things † (as he calls them) indispensably necessary to every man’s life, which promote health, or create distempers according to the good or bad use that is made of them.”

WILLIAM VAUGHAN wrote his *Directions for health*, anno 1607. He makes an apology for in-

* Illustrissimo olim Angliæ Cardinali Alano Serenitati vobis commendatus, cujus gaudeo munificentia non vulgari.

† Præceptiones ad sex capita revocavi, prout sex sunt res quæ in omni vita aut prodesse solent, aut obesse: nempe aër, cibus ac potus, somnus et vigilia, motus et quies, excernenda ac retinenda, et animi accidentia.

truding * into other mens business, as he was no professed physician. He treats his subject by way of question and answer, and writes with a good deal of humour and smartness. "How shall tofs-pots and swill-bowls (says he) be made to hate wine?" He answers this question by asking another: "Look on the countenance of a drunkard, and is it not disfigured? Does not his nose seem rotten, withered, or worm eaten? Does not his breath stink, his tongue falter? Is not his body crazy, and subject to gouts and dropsies?"

In another place he says, that intemperance in eating, as well as in drinking, destroys the faculties of the mind; "for how is it possible that the smoaky vapours, which breathe from a fat and full paunch, should not interpose a thick mist of dulness between the body, and the body's light!"

THOMAS VENNER, doctor of physic at Bath in the spring and fall, and at other times near Bridgewater, published his *Via recta ad vitam longam*, about the year 1620, which he addressed to Francis Lord Verulam. The principal aim of this performance was to recommend Bath, or the true use (as he says) of the baths of Bath, but he treats also of air, aliment, &c. He seems to have been an honest well meaning man, but very formal and prolix in expressing his mind when he writes in English; and a great admirer of Galen's divisions and distinctions, which he displays on all occasions; and

* "For all that I am not a practitioner in this noble science, yet my chiefest pleasure, ever since my childhood, has been to read books of physic, in regard of my own health. Sir Thomas Elliot, a learned knight in king Henry VIII's days, was no practitioner, yet wrote on this very subject."

tho' his book is for the most part written in his own language, he takes care to convey his favourite sentiments * concisely enough in Latin.

He informs us, that the Bath waters were not, in his time, prescribed inwardly by any regular physician, because from their bituminous and sulphureous nature, they relax and weaken the stomach; but he owns that the meaner sort of people, by the persuasion of the Bath guides, used to drink a large draught of the water, with salt in it, to prepare them for the external use of the same water in bathing. He ranges different waters, according to their respective degrees of goodness, in the following order: *viz.* 1. Fountain water. 2. Rain water. 3. River water. 4. Well water. 5. Water conveyed through leaden pipes, which may be mended by boiling. 6. Standing water. 7. Water taken up near the sea shore, which is of a stinking smell and unpleasant flavour.

ANDREW BOORDE, doctor of physic, published, anno 1643, his *Compendious regiment, or Dietary of health*, made in Montpellier, which he dedicated to *The armipotent and valiant lord, Thomas duke of Norfolk*. Besides the common cautions with regard to air, aliment, &c. he observes that tran-

* *Regulæ ad conservationem vitæ saluberrimæ.* 1. Aerem purum, suavesque odores spirare. 2. Cibum aduersante stomacho non ingerere. 3. Cibos naturâ et cõctione multum discrepantes non assumere. 4. Ad saturitatem nunquam edere et bibere. 5. Ventrem modicè laxum habere. 6. Veris initio corpus pharmaco conueniente purgare. 7. Veneris illecebras, ejusque usum immoderatum, tanquam pestem, fugere. 8. Vitam probam et incorruptam degere.

quillity

quillity of mind is necessary to health, and that in order to preserve such a tranquillity, a man must be frugal. He therefore seriously recommends good oeconomy in the following words: " He that will
 " spend more in his house than the rents of his
 " lands or his gains bring in, will come to poverty.
 " He should therefore divide his rents or income
 " into three parts: The first to provide for meat
 " and drink; the second for apparel, servants wages,
 " alms, and other deeds of mercy; and the third
 " should be reserved for urgent cases in time of
 " need, as sickness, repairs, and casual expences
 " otherwise he may fall in debt, and then his mind
 " cannot be quiet; and the perturbation of the
 " heart shortens a man's life."

SPEAKING of the different sorts of meat and drink in common use, he observes that they who put any thing to ale besides water, malt, barm, and godsgood, do sophisticate and spoil it; and that ale should be drank fresh and clear, and neither too old nor too new.

Dr. Edward Maynwaring published his *Tutela sanitatis, or Hygiastick precautions and rules*, anno 1663. The epistle to the reader is written in Latin, but the book in English.

" IT is health (says he) that makes your bed
 " easy, and your sleep refreshing; that renews
 " your strength with the rising sun; that fills up
 " the hollows, and uneven places of your carcass,
 " and makes you plump and comely, and adorns
 " your face with her choicest colours; that makes
 " your exercise a sport; that increases the natural

“endowments of your mind, and makes the soul
“to take delight in her mansion.”

HE has treated of Galen's *six non-naturals* in a short and perspicuous manner, and has added a seventh to them, *viz.* Customs or habits voluntarily contracted by many, which prove useful or detrimental to health, according as they are good or bad, and which should therefore be indulged, or gradually corrected.

ABOUT this time, or rather earlier, Thomas Phayer wrote his *Regiment of life*, translated (in his own) from the French, but amplified by himself.

HE explains the different temperaments of people, namely, the sanguine, phlegmatic, choleric, and melancholic pretty accurately; but I cannot say, that there is any thing extraordinary in his performance.

WILLIAM BULLEYN, in his *government of health*, introduces John, who is a man of pleasure, disputing with Humphry, who is an advocate for temperance; but there is nothing very useful or entertaining in their conversation.

SOON after the commencement of the eighteenth century, Francis Fuller, M. A. published his *Medicina gymnastica*; and tho' his aim was to recommend exercise as the principal remedy in a *consumption, dropsy, and hypochondriacal disorders*, yet there are so many hints, conducive to the preservation of health, scattered through this valuable treatise, that, to them who study what is salutary, the perusal of it will afford both instruction and amusement.

He has from reason and experience demonstrated the good effects of riding on horseback, (which is quite as useful to preserve, as to recover health) and is perhaps the fullest and best author we have on that article.

FRICTION, or the flesh brush, he has likewise treated of very accurately, which is of great use to preserve health. "It is very strange (says he) that this exercise of chaffing the skin, which was in such universal request among the ancients, and which they put in practice almost every day, should be so totally neglected and forgotten by us, especially when we consider that their experiments agree so exactly with our modern discoveries in the anatomy of nature."

Dr. Wainwright's mechanical account of air and diet, was published in 1732, and his chief design was to ~~show~~ **show** the necessity of mathematical knowledge to the rational practice of physic, yet, by the way, he mentions some precepts relating to the preservation of health, under those two heads of *air* and *diet*: and we are much obliged to him for demonstrating the reasonableness and utility of his precepts by proper calculations and experiments. He proves that air too dense, or too much rarified, is hurtful to animals, and consequently that the highest hills, as well as the lowest vallies are unhealthy. He demonstrates that a human body, of a middle size, supports a weight of near a tun and an half of air when the mercury rises to *thirty inches* in the barometer, more than it does when the mer-

cury falls to *twenty-seven* inches; which must have a considerable effect on the motion of the blood and humours. He observes that an air too moist and filled with vapours, whereby its spring is weakened, relaxes the fibres of the body, and obstructs the pores; whence it happens that agues are so epidemical in the fens of Cambridgeshire, and the Hundreds of Essex.

WITH regard to *diet*, he shews that a healthy man has certainly exceeded in the quantity of his food, if he finds himself short breathed, or sleepy immediately after meals; because it is evident from those symptoms, that the stomach is too much distended, and presses upon the *diaphragm*, which straitens the *thorax*; and upon the superior trunk of the *vena cava*, which hinders the free return of the blood from the head.

HE has also proved, by calculating the pressure of water upon the surface of the human body, and by shewing the necessary consequences of such a pressure, that "bathing is not to be practised rashly without good advice and proper precautions;" tho' it has been the ancient practice * of the Jews and Romans, not only as a cure of several distempers, but also for cleanliness and delight.

Dr. Welfted, in his elegant treatise *De ætate virgente*, published *anno 1724*, recommends the fol-

* Bathing is also the modern practice of several nations, especially of the Egyptians, where the women use it, at a great expence, to make them plump and comely, and the men for coolness and health. See Prosp. Alp. de med. Ægypt. lib. 3. cap. 15.

lowing excellent rules to be carefully observed by old people.

1. To be cautious how they change an old custom suddenly, tho' the change, at first sight, should appear commodious; for their strength is not, like that of youth; able to struggle with, or break through a habit which the practice of many years has rendered familiar.

2. To avoid such things as they found by experience to have been detrimental to their health in the former part of their lives; for how should they bear, now when they are feeble, what in their full strength they could not support?

3. LET their food and drink be such as will give no disturbance either to their stomach or to their head. Or, in case they have exceeded by accident, let the excess be immediately discharged.

4. LET their appetite be kept as good, and their secretions as regular as possible.

5. LET their minds be easy and chearful: But this charming serenity is obtained by those only whose age, after a life spent in doing good, affords a retrospect of complacency, and a prospect of happiness.

Dr. Burton's book of the *Non-naturals*, in which "the great influence they have on human bodies is set forth," was published *anno* 1738. And tho' the author's principal scope is to shew the subserviency of a thorough acquaintance with the nature and properties of air, aliment, &c. to the successful practice of physic, and particularly to the cure of epidemical distempers; yet those who study to

preserve health are much obliged to him for several useful precepts and judicious reflexions on that subject, which are to be met with in his treatise. He observes,

1. FOR instance, that “ in the spring the air “ being impregnated with the salubrious effluvia “ of opening flowers, will be more refreshing than “ the autumnal air loaded with steams of putri- “ fying vegetables, which, unless dispersed by “ winds frequent at that season, would soon pro- “ duce fatal effects.”

2. SPEAKING of aliment, he takes notice of the error of those “ who drink too small a quantity of “ cooling diluting liquors in proportion to their so- “ lid food ; by which mistake the blood becomes “ thick, the secretions are diminished, and the sa- “ line particles, for want of a watery fluid to se- “ parate them, cluster together, and corrode the “ capillary vessels.” And

3. He recommends exercise, from the common observation, that the parts, or limbs of the body, which labour most, are larger and stronger than those which have less exercise. Thus the legs and feet of a chairman, the arms and hands of watermen and sailors, the backs and shoulders of porters, by long use grow thick, strong, and brawny.

NEAR the same time was written an *Essay concerning the effects of air on human bodies*, composed by the learned and ingenious Dr. Arbuthnot. After having, with great judgment and accuracy, given us a most curious account of the *contents, properties, qualities, and nature of air, in different seasons and situations;*

situations; and of the influence it has on human constitutions and diseases; our author draws many useful practical aphorisms from the whole; of which the following well deserve the attention of those who are studious to preserve their health.

1. EVERY human creature, whose manner of life demands, and whose constitution can bear it, ought to inure himself to the outward air in different sorts of weather.

2. IN the choice of habitations for mankind, the wholesomeness of the air is a principal consideration, and is as much a particular in the purchase of a seat as the soil.

3. THE local qualities of the air depend upon the exhalations of the soil, and of its neighbourhood, which may be brought thither by the winds: For a gravelly situation may be rendered sickly by a neighbouring marsh.

4. THE qualities of the springs are a mark of those of the air; for the air and water imbibe the saline and mineral exhalations of the ground; therefore where the water is sweet and good, it is probable that the air is so likewise. But the best mark of the wholesomeness of the air is the customary longevity of the inhabitants.

5. DAMPNES of wainscot, rotting of furniture, tarnishing of metals, rusting of iron, efflorescence of salts upon bodies, discolorations of silks and linen, are marks of salts of an unusual nature or quality in the air.

6. THE air of cities is unfriendly to infants and children: For every animal being by nature adapted

to the use of fresh and free air, the tolerance of air replete with sulphureous steams of fuel, and the perspirable matter of animals (as that of cities) is the effect of habit, which young creatures have not yet acquired.

7. THE first care in building cities is to make them airy and well perfated; because infectious distempers must necessarily be propagated amongst mankind living too close together. The air is also extremely tainted by having *burial places* within the precincts of great cities.

8. PRIVATE houses ought to be perfated once every day, by opening doors and windows to blow off the animal steams. Houses, for the sake of warmth, fenced from wind, and where the carpenter's work is so nice as to exclude all outward air, are not healthy; for people who pass most of their time in air tainted with steams of animals, fire, and candles, are frequently infected with nervous distempers.

THE next performance relating to our subject, that has come to my hands, is Dr. Barnard Lynche's *Guide to health through the various stages of life*, printed 1744. In the first part of his book, besides clearing up the different changes in the life of man, and the unavoidable causes of decrepitude and death, our author has given us, from the sacred scriptures, from Pliny, and other historians, a well attested account of the longevity of several sober and regular persons in various ages of the world; which examples teach those, who desire long life,

the:

the necessity of temperance more effectually than they can be taught by precepts.

AND in the second part, his *Analysis of air, aliment, and the other non-naturals*, is full and perspicuous. He has explained their respective natures and properties according to the theory of the most celebrated modern physicians; and has given us several useful precepts of health, together with the reasons for enjoining them, in a distinct and ingenious manner, which merits our particular attention. He shews, for instance, "that the more
 " of a sulphureous or chymical oil any distilled
 " spirit contains, the more pernicious it proves to
 " the human body, because it is harder to be washed
 " away by the blood; therefore brandy * is more
 " easily carried off than rum; and Geneva than
 " annise-feed water."

2. To recommend moderate sleep, he observes that we may look upon the time of waking as the time of wearing out the animal fabric; and the time of sleep as that in which it is repaired and recruited; for, in action, something is continually abraded from the fibres which cannot otherwise be restored than by their rest from tension, and by the regular and steady course of the blood in sleep, which is proper for nourishment, or an apposition of parts to the wasted vessels.

3. In describing the just measure of exercise, he says, that those who are lean should continue their

* This opinion must rest upon the experience of those who accustom themselves to such liquors, which, if frequently used, are all pernicious.

exercise only *ad ruborem*, or till the body is gently heated, for that will fatten them ; but they who are fat, may continue it *ad sudorem*, because sweating will help to extenuate the body.

4. **SPEAKING** of the saliva or spittle, he takes notice, that they who, immediately after eating, fall to smoking or chewing tobacco, commit two destructive errors: 1. In diverting the saliva from its natural office ; and spitting out that fluid which so greatly contributes to digestion. 2. In using that stupifying *American Henbane*, or opiate, which numbs the nerves and destroys the appetite. To conclude, this author merits our esteem for his love and recommendation of virtue and piety.

THE last of the British authors that has touched this subject is Dr. Mead, who has done honour to our country by his deep knowledge in physic, by his refined taste in the polite arts, and by his unbounded benevolence and generosity to men of merit.

THIS great physician has closed his book entitled *Monita et præcepta medica*, published anno 1751, with several excellent rules and remarks concerning the preservation of health, some of which he took from his favourite *Celsus*, and some from his own observation. Of the latter are these :

1. A man who has eat a large meal, especially of high seasoned food, will receive benefit from drinking after it a draught of cold water with some juice of lemon, or elixir of vitriol, to assist his digestion.

2. OLD men should retrench a little of their solid food, and make a proportionable addition to their drink.

3. THEY should also be well rubbed with a flesh brush every morning, to supply that exercise which, for want of strength, they cannot use, tho' their health requires it.

4. THE frigidity of men advanced in years, is a faithful monitor, that points out to them the folly of forcing themselves to exert a vigour which they have lost, vainly expecting raptures, but finding only an irksome labour * that will shorten their days.

5. NOTHING can be more detestable, or more pernicious to health, than for a man to *commit lewdness on himself*.

6. THE gifts of providence, which contribute to health, and the real happiness of life, are more equally distributed than we are willing to believe; and perhaps a larger share of them is possessed by men of low degree, than by those of high rank or great affluence. Moderate labour supplies a poor man with wholesome food, and at the same time gives him an appetite to relish, and strength to digest it; without goading his lust or inflaming his passions. His sleep is sound and refreshing, undisturbed with corroding cares: And his healthy and

* It should seem that the author had his eye on these lines of Virgil, Geor. 3. v. 97.

frustra que laborem
Ingratum trahit: et, si quando ad prælia ventum est,
Ut quondam in stipulis magnus sine viribus ignis,
Incaustum furit.

Hardy offspring, nursed up in temperance, soon grows fit to partake of that labour which made the parents happy. How different are the effects produced by the sloth and luxury of the rich! To enable them to eat, their stomachs require high sauces which heat and corrupt their blood, pamper their vicious inclinations, and render them obnoxious to various diseases. The excess of the day destroys the sleep of the night. Their children are tainted in their mother's womb, with distempers which afflict their whole lives, and hardly permit them, diseased and decrepid, to arrive at the threshold of old age. Besides, an anxiety to obtain honours and titles perpetually harasses their weak minds, and the felicity of enjoying what they possess, is forfeited by the restless desire of getting more.

7. NEXT to temperance, the surest means to keep the affections of the mind in due subjection to reason is, to associate with wise * and good men, whose conversation and example is very prevalent in regulating the passions, which, unless they are taught to obey, will be sure to grow headstrong and imperious.

* Euripides was of the same opinion: "The wise (said he) will become more wise, by frequently conversing with the wise."

P A R T II.

Containing a succinct review of the most important rules recommended by physicians and philosophers, for the preservation of health: Together with a sketch of the reasons whereon these rules are founded, drawn from the mechanism of the human body.

C H A P. I.

Exhibits a short view of concoction, or the mechanism by which our aliment is digested; and of the circulation of the blood; from which it will be obvious to perceive the ground and reason of the rules laid down for the preservation of health, and the expediency of observing them.

THE art of preserving health promises three things: *First*, To secure or maintain the health which a man enjoys at present. *Secondly*, To prevent approaching distempers. *Thirdly*, To prolong life. Of all which I shall treat in the order here mentioned.

THE first of these, in a great measure, includes the other two, because a diligent observation of the rules proper to preserve health, will, for the most part, prevent approaching distempers; and dispose the body to longevity. The first, therefore,

fore, requires to be treated of, more largely than either of the other articles. But to set it in a clear light we must previously describe some parts of the animal structure and oeconomy, from which we may readily perceive the reason of the rules recommended to preserve health, and the necessity of putting them in practice.

AND here we may, with pleasure, remark a surprising agreement and harmony between the successful practice of the ancients, directed only by their assiduous observation of nature, and the mechanical theory of the moderns, founded upon the wonderful structure of our solids, and the perpetual rotation of our fluids, with which the ancients were unacquainted.

ANATOMY discovers ten thousand beauties in the human fabrick, which I have no room to mention here; nor is it possible, in a performance of this kind, to describe the geometrical accuracy with which the author of nature has formed every part of the body to carry on the animal oeconomy, or answer the various purposes of life. All I propose in this place is, by touching upon a few particulars, to give those, who are unacquainted with our profession, a general idea of the structure of their own bodies, from which they will easily apprehend, that intemperance, sloth, and several other vices and errors, have a necessary and mechanical tendency to destroy health. To this end it will be indispensably requisite to give some account of concoction, or the mechanism by which our aliment is digested: and then to take notice of
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the circulation of the blood, with some of its necessary consequences.

OF CONCOCTION.

AMONG all the wise contrivances observed in the human fabric, none can excite our attention and admiration more than the disposition and mechanism of those parts, by which our aliment is concocted, or fitted for our daily support and nourishment. To have a clear idea of the manner in which concoction is performed, we must distinguish it into three stages. The first stage is performed in the progress of the aliment from the mouth down to the lacteal veins *. The second is performed in the passage of the milky liquor, called chyle, through the lacteal vessels to the loins, and then up to where it mingles with the blood, under the collar-bone. The third or ultimate concoction is performed by the circulation of the blood and chyle together, through the lungs, and the whole arterial system. In all these stages, the design of the great architect has evidently been to grind and dissolve the aliment, and to mix and incorporate it with a large quantity of animal juices already prepared, in such a manner as to reduce it at last to the very same substance with our blood and humours. How wonderfully and completely this design has been executed we shall see presently.

IN the first stage of concoction, by a curious

* The lacteal, or milky veins, are small vessels, that receive the chyle from the intestines.

configuration

configuration of parts, and action of muscles *, adapted to their respective functions, our food is ground small by the teeth, and moistened by a copious saliva † in the mouth. It is in the next place swallowed, and conveyed down the gullet, where it is farther mollified and lubricated by a viscid unctuous humour, distilled from the glands of that canal. From thence it slips into the stomach, where several causes concur towards its more complete dissolution. It is diluted by the juices, it is swelled and subtilized by the internal air, and it is macerated and dissolved by the heat which it meets with in that cavity. It is also agitated and attenuated by the perpetual friction of the coats of the stomach, and the pulsation of the arteries there; by the alternate elevation and depression of the diaphragm ‡ in breathing; and by the compression of the strong muscles of the

* Vid. Boerh. instit. sect. 58. et seq.

Boerhaave has given a fuller and clearer view of the animal economy than any other man ever did. His institutions contain an accurate description of all the principal actions performed in the human body, deduced in the most consequential order that can be imagined; and intelligible to those who are previously acquainted with all the branches of anatomy. But this book was calculated for physicians only; and no man, probably, of any other profession will ever take the pains to understand it.

N. B. A muscle is a mass or collection of fibres, of different dimensions, by which all the motions of every part of the body are performed.

† The saliva, or spittle, is a pure, pellucid, penetrating humour, containing oil, salt, water, and spirit, strained from the arterial blood, and very useful in digestion; and therefore the habitual and immoderate discharge of it, in chewing and smoking tobacco, must be of bad consequence.

‡ The diaphragm or midriff, is a very large transverse muscle, which separates the thorax or chest from the abdomen or belly, and squeezes the contents of the stomach and intestines.

belly,

belly. And after a proper stay, it is gradually propelled into the intestines, in the form of a thick, smooth, uniform, ash coloured fluid.

WHEN our aliment, thus prepared, arrives at the intestines, it is there mixed with three different sorts of liquor. It receives two sorts of bile*; the one thick, yellow; and extremely bitter, from the gall-bladder; the other scarce yellow, or bitter, but in a much larger quantity, from the liver. The third liquor, that falls here upon the aliment, issues plentifully from a large glandular substance, situated beneath the stomach, called the pancreas or sweet bread, and is a limpid mild fluid, like the saliva, which serves to dilute and sweeten what may be too spiss and acrimonious. The two saponaceous biles resolve and attenuate viscid substances; incorporate oily fluids with aqueous, making the whole mixture homogeneous; and by their penetrating and detergent qualities render the chyle fit to enter the lacteal veins, into which it is conveyed partly by the absorbent nature of these veins, and partly by the peristaltic † motion of the intestines.

If we now consider the change which our aliment has undergone in the mouth, gullet, and stomach, together with the large quantity of bile

* The bile or gall is the principal dissolvent of the aliment, and when it is vitiated or defective, there can be no good digestion.

† Peristaltic (from *περιστάλλω*, *contraho*) is that vermicular motion of the intestines produced by the alternate and progressive contraction and dilatation of their spiral and orbicular fibres, which presses the chyle into the lacteals and answers many other good purposes.

and pancreatic juice poured upon it in the intestines: And if we reflect also on the incessant action of the muscles, blending, churning, and incorporating the whole, we shall readily perceive, that their united agency must alter the particular tastes, flavours, and properties of our different kinds of food, in such a manner as to bring the chyle nearer in its nature to our animal juices, than to the original substances from which it was formed. Our aliment thus changed into chyle, constitutes the first stage of concoction; and we shall find the same assimilation carried on through the second.

THE second stage of concoction begins with the slender lacteal veins, where they arise from the intestines by an innumerable multitude of invisible pores, through which the fine, white, fluid part of the chyle is strained or absorbed; while, at the same time, the gross, yellow, fibrous part, conveyed slowly forward, and farther attenuated in the long intestinal tube, is perpetually pressed and drained of its remaining chyle, until the dregs, becoming at last useless, are ejected out of the body.

THESE lacteal veins issue from the intestines in various directions, now straight and now oblique, often uniting and growing larger, but presently separating again. They frequently meet at sharp angles, and enter into soft glands, dispersed through the mesentery*, from which they proceed larger than before, and more turgid, with a fine lymphatic

* The mesentery is that strong double membrane within which the intestines are convolved, and is interspersed with innumerable glands, nerves, arteries, lacteal and lymphatic vessels.

tic fluid. In most places also they run contiguous with the mesenteric arteries, by whose pulsation their load is pushed forward. And thus, after various communications, separations, and protrusions, the lacteal veins pour their chyle into a sort of cistern * or reservoir formed for that purpose between the lowest portion of the diaphragm and the highest vertebre of the loins †. It is very remarkable, that these veins are furnished with proper valves which permit the chyle to move forward, but effectually stop its return; and that a great number of veins purely lymphatic, as well as the lacteal, empty themselves into the same cistern.

IN all this contrivance it is evident that the chyle, being more and more diluted and blended with abundance of lymph ‡ from the glands through which it passes, and from other sources, approaches still nearer to the nature of our animal juices, and consequently becomes fitter for nutrition.

From its reservoir the chyle is pushed into a narrow transparent pipe, called the *thoracic duct*, which climbs in a perpendicular direction by the side of the back-bone, from the loins up to the collar-bone, and opens into the subclavian vein §; where,

* This cistern (as anatomists call it) is often found to consist only of some large branches of the lacteal veins.

† The several bones which compose the chine are called vertebres, of which five belong to the loins.

‡ The lymph is the most elaborated and finest part of the blood, which is continually flowing into the chyle through its whole course.

§ Most commonly into the left, but sometimes, tho' very rarely,

where, by a peculiar arrangement of several small valves, the chyle mingles gently with the blood, after it has been thoroughly elaborated, churned, and attenuated with lymph from every part of the thorax †, and is from thence soon conveyed to the heart.

Thus, by a wonderful mechanism, we may plainly perceive that a large quantity of chyle and lymph is forced upwards, in a perpendicular course, through a thin slender pipe, if we attend to the following particulars: *First*, To the progress of the chyle, urged forward and continued from the antecedent action of the intestines, and the beating of the mesenteric arteries. *Secondly*, To the motion of the diaphragm and lungs, in respiration, pressing this thoracic duct that lies under them, while the thorax rising and falling resists their action, whereby the duct is squeezed between two contrary forces, and the liquor which it contains pushed upwards. *Thirdly*, This duct runs close by the side of the great artery, (called by anatomists the superior portion of the descending aorta) whose strong pulsation presses its yielding sides, and compels the chyle and lymph to mount in an upright ascent. *Fourthly*, We are to observe that this duct is accommodated with valves, which permit its contents to move upwards by every compression, but never to fall back again. Thus ter-

rarely, into the right: Nay, sometimes, as that accurate anatomist Dr. Monro observes, it divides into two under the curvature of the great artery; one goes to the right, and the other to the left subclavian vein.

† By thorax is meant the great cavity of the breast.

minates

minates the second stage of concoction, when the chyle falls into the heart. And we see that, in its progress through these two stages, our aliment has been accurately mixed with all the nourishing juices of the body, and with all the substances or principles that compose the blood, *viz.* saliva, mucus, lymph, bile, water, salts, oil, and spirits.

BUT here we must take notice, that the most fluid and subtile part of our aliment, before and after it is elaborated into chyle, passes into the blood by certain absorbent veins dispersed all over the mouth, gullet, stomach and intestines. This is evident from the sudden refreshment and strength communicated to weary, faint and hungry people, immediately upon drinking a glass of good wine; or eating any cordial spoon meat; and from the flavour which different sorts of food give to the urine, much sooner than it is possible for the chyle to reach the heart in its common windings.

THE third stage of concoction begins where the chyle mingles with the blood, and falling soon into the right ventricle of the heart, is from thence propelled into the lungs. It will appear that the lungs are the principal instrument of sanguification, or converting the chyle into blood, if we consider their structure, first with regard to the air vessels of which they are composed, and secondly with regard to their blood vessels; for we shall then clearly perceive the change which their fabric and action must necessarily produce on the chyle. The wind pipe is composed of segments of cartilaginous rings on the fore part, to give a free passage to
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the air in respiration; and of a strong membrane on its back part, to bend with the neck, and give way to the gullet in deglutition. This pipe is lined throughout with an infinity of glands, which perpetually distill an unctuous dense humour to lubricate and anoint the passages of the air. Soon after the wind pipe has descended into the cavity of the breast, it is divided into two great branches, and these two are subdivided into innumerable ramifications called Bronchia *, which grow smaller in their progress, (not unlike a bushy tree inverted) until at last they terminate in millions of little bladders, which hang in clusters on their extremities, and are inflated by the admission of the air, and subside at its expulsion. These clusters constitute the lobes of the lungs. The blood vessels of the lungs next deserve our attention. The branches of the pulmonary artery run along with those of the windpipe, and are ultimately subdivided into an endless number of capillary ramifications, which are spread like a fine net-work, over the surface of every individual air bladder. And the pulmonary vein, whose extreme branches receive the blood and chyle from those of the arteries, run likewise in form of a net over all the air bladders of the Bronchia.

FROM this admirable structure of the lungs, it is obvious, that the crude mixture of the blood and chyle, passing through the minute ramifications of the pulmonary artery and vein, is com-

* From *Βρυχός*, gutter.

pressed and ground by two contrary forces, *viz.* by the force of the heart driving the mixture forward against the sides of the bronchia and air bladders; and by the elastic force of the air equally repelling this mixture from the contrary side.

By these two opposite forces, the chyle and blood are more intimately blended and incorporated; and by the admission and expulsion of the air in respiration, the vessels are alternately inflated and compressed (and probably some subtiler air or æther is received * into the blood) by which means the mixture is still further attenuated and dissolved; and after various circulations through the lungs, and heart, and the whole arterial system, is at last perfectly assimilated with the blood, and fitted to nourish the body, and answer the different purposes of animal life.

WHEN the blood thus prepared from the aliment is by repeated circulations gradually drained of all its bland and useful parts, and begins to acquire too great a degree of acrimony, it is carried off by sensible and insensible evacuations, through the several channels and distributions of nature. By these evacuations the body becomes languid, and requires a fresh supply of aliment; while at the same time the saliva, and juices of the stomach

* This seems, at least, probable from the following simple experiment: Some physicians at Worcester laid bare the crural artery of a fowl, and made two firm ligatures on the artery, at the distance of an inch one from the other. They then cut out the artery above and below the two ligatures, and put it immediately into an air pump, and upon exhausting the air, the section of the artery between the ligatures, which was full of blood, swelled instantly to a considerable degree.

and intestines, growing thin and acrid by multiplied circulations, vellicate the nerves of those passages, and excite hunger, as a faithful monitor, to remind us of that refreshment which is now become necessary.

FROM this short view of concoction it follows, first, that the immense variety of aliments, which the bounty of heaven has provided on the earth and in the waters, for the sustenance of man, is by this divine mechanism, reduced at last to one red, uniform, vital fluid, proper to nourish and support the human fabric.

IT follows in the next place, that when we take in a larger quantity of aliment than our digestive faculties are able to conquer and assimilate, such a quantity can never turn to good nourishment.

THIRDLY, when by the arts of luxury our food is rendered too high and rich, and consequently too much saturated with pungent salts, and oils; such mixtures with the blood will contribute rather to destroy than maintain health.

IT follows, fourthly, that exercise is necessary to assist the solids * in rubbing, agitating, and levigating our aliment, to mix it intimately with our animal juices, and make it pass with ease through these narrow pipes and subtile strainers, which it must pervade, in order to nourish the body. And here we may observe, that moderate riding on horseback, accommodated to a person's strength, is, of all exercises the most proper to promote a

* By solids here I mean the muscular fibres of the body, or the action of the several muscles concerned in concoction.

good digestion, by means of that infinity of gentle succussions which it gives to the bowels; whereby the stomach is assisted to dissolve the remains of the aliment; the chyle is forwarded in passing from the intestines into the lacteal veins; the lymph and chyle together are pushed briskly through the thoracic duct into the heart; and the circulation is invigorated to assimilate that mixture into good blood and healthful nourishment; and to throw all superfluities, through the natural drains, out of the body. From this corollary may be clearly deduced the reasonableness of every argument advanced by Sydenham, Fuller, and others, to recommend riding.

FIFTHLY, people in health should not force themselves to eat when they have no inclination to it; but should wait the return of appetite, which will not fail to admonish them of the proper time for refreshment. To act contrary to this rule frequently, will overload the powers of digestion, and pervert the purpose of nature.

AND to add but one consequence more, it is evident from what has been said, that to facilitate a complete digestion, our aliment ought to be well chewed.

IN short, the reason and expediency of every rule established by experience to direct us in the quantity and choice of our aliment, may, with a little attention, be plainly deduced from the mechanism by which concoction is performed.

Of the Circulation of the Blood, and its Consequences.

EVERY man talks familiarly of the circulation of the blood, and seems to be well acquainted with that subject. But when it is thoroughly considered, it will appear to be one of the most stupendous * works of omnipotence. Tho' the life of the animal absolutely depends upon it, yet the greatest physicians and philosophers of antiquity knew it not. To England, and modern times, was reserved the glory of bringing this important secret to light. And even after the immortal Harvey † published his discovery with all the evidence of a demonstration, it was a long time before Riolanus, and the best anatomists of those days, could be persuaded of the truth of it. So great was their attachment to the ancients, that they could scarce believe their own eyes.

To form a distinct judgment of the mechanism and importance of the circulation, it will be necessary to describe the structure of the arteries, veins, and nerves; and take notice of some experiments made upon them. We must in the

* Ne igitur miretis solem, lunam, et universam astrorum seriem summo artificio dispositam esse, neve te attonitum magnitudo eorum, vel pulchritudo, vel motus perpetuus reddat adeo, ut si inferiora hæc comparaveris, parva tibi videantur esse: etenim sapientiam, et virtutem, et providentiam hic quoque similem invenies Gal. de usu partium, lib. 3. cap. 10. vers. latin vulgar.

† William Harvey was born at Folkston in Kent *anno* 1557, and educated at Cambridge. He studied five years at Padua, was physician to Charles I. and lived to fourscore.

next place touch upon the cavities of the heart, by means of which the blood is propelled through the body. And then proceed to observe the extensive use and benefit of this circulation to every branch of the animal oeconomy. From all which it will be obvious to deduce the congruity of the principal rules established by experience for the conservation of health.

THE arteries are blood-vessels consisting of a close texture of strong elastic * fibres †, woven in various webs, laid in different directions, and interspersed with an infinity of delicate nerves, veins, and minute arteries. They are divided and subdivided into numberless branches and ramifications, that grow smaller and smaller as they recede from the heart, until at last their extremities become much more slender than the hairs of a man's head, (called therefore capillary arteries) which are found either to unite in continued pipes with the beginnings of the veins, or to terminate in small receptacles, from which the veins derive their origin. The arteries have no valves but only where their trunks spring from the heart. They throb and beat perpetually while life remains; and their extremities differ in the thickness of their coats, and some other particulars, according to the nature of the part which they pervade. All the arteries in the lungs (except the small ones that

* Elastic bodies (from *ελαστός*, *agile*) are those which have the power of a spring, or of restoring themselves to the posture from which they were displaced by any external force.

† By fibres are meant small animal threads, which are the first constituent parts of the solids.

convey nourishment to them) are derived from the great pulmonary artery, which issues from the right ventricle of the heart. And all the arteries in the rest of the body proceed from the aorta*, whose trunk springs from the left ventricle of the heart.

THE veins resemble the arteries in their figure, and distribution, but their cavities are larger, and their branches perhaps more numerous. Their coats are much weaker and slenderer than those of the arteries. They are furnished with several valves, contrived in such a manner as to permit the blood to pass freely from the smaller into the larger branches, but stop its retrogression. They neither throb nor beat. Their beginnings form continued pipes with the extremities of the arteries, or arise from some gland or receptacle, where the arteries terminate. All the veins in the lungs, from their capillary beginnings growing still larger, unite at last and discharge their blood into the left auricle † of the heart. And all the veins in the rest of the body empty themselves in like manner, into the *vena cava*, which opens into the right auricle of the heart.

THE nerves deduce their origin from the brain or its appendages, in several pairs, of a cylindric

* Aorta properly signifies an air vessel (from *air*, *aër*, et *ἀπὸ τέρου*) because the ancients thought that this artery contained air only.

† The right and left auricle are two muscular caps covering the two ventricles of the heart, thus called from the resemblance they bear to the external ear. They move regularly like the heart, but in an inverted order, their contraction corresponding to the dilatation of the ventricles.

form, like so many skains of thread within their respective sheaths, which in their progress decrease by endless divisions and subdivisions, until at last they spread themselves into a texture of filaments so slender, and so closely interwoven with each other over the whole body, that the point of a needle can hardly be put upon any part or particle of it, without touching the delicate branch of some nerve.

THE great Harvey, and others, made several experiments upon the vessels we have described, in order to demonstrate the circulation of the blood. For instance, it has been found by many trials, that when an artery is laid bare, and a ligature made upon it, if you open the artery with a lancet between the ligature and the heart, the blood will rush out with great violence; and this rapid jerking stream will continue (unless you stop it by art) until, through loss of blood, the animal faints or dies. But if you open the same artery between the ligature and the extremities, a few drops only will ouze out from the wounded coats of the artery.

ON the other hand, when a vein is laid bare, and a ligature made upon it, if you open that vein between the ligature and the extremities, the blood will gush out, as we see in common venæsection. But if we open the same vein between the binding and the heart, no blood will appear. From these experiments it is obvious to the slightest attention, that the blood flows from the heart, through the arteries, to the extreme parts of the

body; and returns again through the veins to the heart.

FOR the regular performance and continuation of this motion of the blood (called its circulation) through all the different parts of the body, the wise Architect has furnished the heart, which is the *primum mobile*, and gives the first impulse, with four distinct muscular cavities, that is, with an auricle and a ventricle on the right side, and an auricle and a ventricle on the left. Through these cavities, curiously adapted to their respective offices, the blood circulates in the following order: It is received from the veins first into the right auricle, which contracting itself, pushes the blood into the right ventricle at that instant dilated. The moment this ventricle is filled, it contracts itself with great force, and impells the blood into the pulmonary artery, which passing through the lungs, and returning by the pulmonary veins, is received into the left auricle of the heart, and from thence it is pushed into the left ventricle thus filled, contracts itself, and drives the blood with great rapidity to all the parts of the body, and from them it returns again through the veins into the right auricle of the heart as before. It is very remarkable, that we have here a double circulation: One from the right ventricle *through the lungs*, to the left auricle of the heart, in order to convert the chyle into blood, and finally prepare it for the nourishment of the animal. The other from the left ventricle *through the whole body*, to the right auricle of the heart, which serves to
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apply that nourishment to every part, besides various other purposes.

BUT to proceed. Of these four muscular cavities, the two auricles are contracted at the same instant, while the two ventricles are dilated; the ventricles in their turn are contracting themselves at the very instant that the auricles are dilated. The arteries, in like manner, beat in alternate time with the ventricles of the heart; that is, when the ventricles are contracted the arteries are distended, and while the arteries contract themselves the ventricles are distended.

THE nerves, as well as the veins and arteries, act their part in this rotation of the blood; for if you bind up the eighth pair which proceeds from the brain to the heart, the motion of the heart immediately languishes, and soon ceases intirely.

THUS we have a *perpetual motion* (so vainly sought for by some philosophers and mathematicians) which none but a being of infinite wisdom and power could produce; and perhaps its continuation requires the constant aid of the same hand that first gave it existence. The brain transmits animal spirits to the heart, to give it a vigorous contraction. The heart, at the same instant, pushes the blood into the brain to supply it with new spirits; by which means the head and the heart mutually support each other every moment. But this is not all: The action of the heart sends the blood and other vital humours over the whole body by the arteries, and distributes nourishment

and vigour to every part*, (while perhaps the animal spirits, from the extremities of the nerves, return again into the blood) and the whole reflux-mass is conveyed back through the veins into the heart, which enables it, without intermission, to persist in rolling this tide of life.

If, we now take a view of the use and importance of the circulation of the blood to the whole animal œconomy, we shall find it very extensive.

1. WHEN this circulation is duly performed, man continues in good health; when it grows irregular he sickens; and when it ceases he dies. Nay, if but one member should be deprived of it, that member presently corrupts and mortifies. By means of this circulation, every natural secretion is mechanically regulated, the perspiration promoted, all the dregs of the body discharged, and distempers frequently cured without any other assistance.

2. WHEN the circulation is naturally quick and vigorous, the temperament of the body becomes habitually hot; when it is languid and slow, the temperament is cold. When the original stamina of the solids, which press forward this circulation, are compact and firm, the constitution is proportionably strong; when they are lax and delicate, the constitution is weak and tender. When bile or phlegm prevails in the fluids, the complexion corresponds with the prevailing humour,

* The lungs not excepted, which receive their nourishment by the bronchial arteries from the aorta.

and is accordingly called bilious or phlegmatic: Thus, from the different velocity of the circulation, the different strength of the stamina, and the different mixture of the fluids in every individual, arises that *peculiar disposition*, or * *ιδιουγενεσία*, which is the true cause why several things that are hurtful to some are beneficial to others; and why the same person finds some things agree with him at one time, which have disagreed at another.

BUT further, a moderate and calm circulation of the blood is necessary even towards the right government of our passions, and the true use of our reason. We know by daily experience, that the influence of the mind upon the body, with respect to health, and of the body upon the mind, with respect to the intellectual faculties, is very great. Sudden terrors have killed some, and distracted others. Anger and grief impair health, cheerfulness and contentment promote it: Inflammations, and other disorders of the brain, suspend the right use of our reason: Many arguments induce us to believe, that the nerves serve for *sensation* and *muscular motion*, and that by means of these two, the mind carries on its correspondence with external objects. We know also that the nerves are supplied with spirits from the brain, and the brain with blood from the heart. From all which it is evident, that the circulation must be gentle and regular, in order to prevent the pas-

* This word cannot be accurately translated into our language, but it means *that singular disposition of the solids, and mixture of the fluids which are in every individual.*

sions from growing boisterous or head-strong; and that consequently it is the source of that rational correspondence and harmony, which should subsist between the human mind and body.

I SHALL conclude this article of the uses of the circulation, with observing, that the same circulation, which supports life so long, and preserves it in vigour, does at last, by a mechanical necessity, stop its own course, and destroy the animal. From the perpetual friction and attrition of the parts one against another, the stamina or fibres in a course of years become rigid, and lose their spring; the larger pipes grow hard, and the small ones, contracting gradually, become at last impervious; the body is shrivelled, and the motion of the fluids first languishes, and then ceases: And these causes gradually bring on old age and death, which approach sooner or later, as the attrition of the parts has been either rashly hurried on with the violence and impetuosity of excess and riot, or gently led with the calmness of moderation and temperance.

FROM what has been said; it should seem manifest that health consists in a moderate, equable and free circulation of the blood; and other vital fluids of the body through their correspondent canals. It is no less certain, that a proper degree of strength and elasticity in the stamina of these cavities and pipes, is necessary to enable them to push on the fluids with vigour, and that the fluids must be of a proper consistence and quantity, to make them yield to the impulse of the solids.

Let

Let us now apply this idea of health to the *five instruments of life*, and we shall see the reasonableness of the rules laid down with regard to every one of them. It will be sufficient to give one instance of the most important precepts of each; and first, as to the air:

1. THE principal rule in reference to the air is, that we should chuse such as is pure, and free from all pernicious damps and redundant mixtures, and known by experience to be salubrious. The reasonableness of this rule will appear, when we consider, that the air is indispensably necessary to expand the lungs, and that it mingles not only with our aliment, but also with our blood and juices, and consequently that it ought to be pure and elastic, because any pernicious qualities in it would soon taint the blood, and disturb the circulation, or which is the same thing, in other words, would afflict or destroy the life of the animal.

2. An important rule with respect to aliment is, that it should be used just in such a quantity as we find by experience to agree with us, and sufficient to invigorate, but not to load the body. The expediency of this rule will be evident, when we reflect that aliment was appointed to supply what is thrown off by the continual attrition of the solids, and dissipation of the fluids, and that consequently too rigid abstinence will render the solids languid, and unfit for action; and too great excess will increase the fluids so as to choke up, or burst the tubes thro' which they pass; and it is plain that either of these errors would in a short time stop the circulation.

3. We

3. WE are advised to use moderate exercise; adjusted as exactly as we can to the quantity of our aliment, that so an equipoise may be maintained between what is thrown off, and what is taken into the body. Now, since moderate exercise is known to give strength to the solids, and motion to the fluids, it is obvious to the slightest consideration, that too much would overheat the fluids, and render the solids stiff; and too little would relax the solids, and make the fluids stagnate; both which extremes are inconsistent with a free circulation.

4. As sleep was intended by nature to cherish the body after the action or fatigue of the day, by a new and refreshing apposition of parts, which work requires an adequate proportion of time, that differs in different constitutions; it follows, that too little sleep must waste and dry the animal, and too much would render it dull and heavy.

5. In reference to repletion and evacuation; since the quantity and quality of the fluids should bear an exact proportion to the strength and elasticity of the solids, it is certain, that all superfluous recrements and hurtful humours must be discharged out of the body, lest they should disturb or destroy the necessary equipoise between the solids and fluids; and that all useful humours must be retained, in order to preserve this balance.

6. LASTLY, As the passions and affections of the mind, by creating disorders in the blood, have so great an influence on health, it is evident that a habit of virtue which can govern these passions,

and

and make them subservient to reason, is the first and principal rule in which mankind ought to be trained up, to secure a good state of health in all the periods of life.

C H A P. II.

A summary of the rules of health proper to be observed, with regard to every one of the six things necessary to human life, as air, aliment, exercise, &c. together with some other general maxims.

OF the rules requisite to preserve health, some are general or common to all ages and conditions of men; and some are particular, or adapted to different periods and circumstances of life. Under the general rules are comprehended those which relate to the *six instruments of life*, as air, aliment, &c. together with some other useful maxims. Under the particular rules are reckoned, *first*, Those which are peculiar to different temperaments, namely the bilious, sanguine, melancholic and phlegmatic. *Secondly*, Those rules that belong to different periods of life, as infancy, youth, manhood, and old age. *Thirdly*, Those that are appropriated to different conditions and circumstances of men, considered as active or indolent, wealthy or indigent, free or servile.

I shall mention all these in order, beginning with the general rules which relate to Galen's *Six Non-naturals*, viz: air, aliment; exercise and rest, sleep and wakefulness, repletion and evacuation, together with the passions and affections of the mind.

Of AIR.

Air, by its extreme subtilty and weight, penetrates into, and mingles with every part of the body; and by its elasticity gives an intestine motion to all the fluids, and a lively spring to all the fibres, which promote the circulation. As it is therefore the principal moving cause of all the fluids and solids of the human body, we ought to be very careful in chusing a healthy air, as far as it is in our power.

1. THAT air is best which is pure*, dry, and temperate, untainted with noxious damps, or putrid exhalations from any cause whatsoever; but the surest mark of a good air, in any place, is the common longevity of its inhabitants.

2. A house is healthy which is situated on a rising † ground and a gravelly soil, in an open dry country; the rooms should be pretty large, but not cold; the exposure prudently adapted to the nature of the climate, but so contrived that your house may be persflated by the east or north winds whenever you please, which should be done at least once every day, to blow away animal steams, and other noxious vapours. But especially let the air of your

* By pure and dry is not meant an air absolutely clear from any heterogeneous mixture, for that is impossible, nor would such be fit for animals, but an air not overcharged with any steams.

† See Columel. de re rust. lib. 2. cap. 4. *Habitatio igitur aer calidus et frigore temperatus, quem mediis fere obtinet collis, loco paululum intumescente, quod neque depressus hieme pruina torpet, aut taret aestate vaporibus.*

bed chamber be pure and untainted, not near the ground, or any kind of dampness.

3. EVIDENT marks of a bad air in any house, are dampness or discolouring of plaitter or wainscot, mouldiness of bread, wetness of sponge, melting of sugar, rusting of brass and iron, and rotting of furniture.

4. THERE is nothing more apt to load the air with putrid steams, or breed bad distempers, than the general and pernicious custom of permitting *common and crowded burial places* to be within the precincts of populous cities.

5. THE air of cities being loaded with steams of fuel, and exhalations from animals, is unfriendly to infants * not yet habituated to such noxious mixtures.

6. SUDDEN extremes of heat and cold should be avoided as much as possible; and they commit a most dangerous error, who, in the winter nights, come out of the close, hot rooms of public houses, into a cold and chilling air, without cloaks or furtouts.

Of ALIMENT.

1. THE best food is that which is simple, nourishing, without acrimony, and easily digested; and

* Founded upon experience, is mentioned a calculation in the bishop of Worcester's excellent sermon, (page 18, 19.) preached for the benefit of the Foundling Hospital *anno* 1756, showing that many more children die in proportion, which are nursed in a populous city, or brought up by hand, than if they were nursed in the country, and nourished at the breast.

the principal rule to be observed with regard to aliment in general, is to eat and drink wholesome things in a proper quantity. But, you will ask, how shall the bulk of the people distinguish wholesome aliment from unwholesome? And how shall they measure the quantity proper for them? I answer, that almost all the aliment in common use has been found wholesome by the experience of ages, and a moderate healthy man need not be under great apprehensions of danger in partaking of such. But there is an obvious rule which will direct every individual aright in the choice of his aliment. Let him observe what agrees with his constitution and what does not, and let his experience and reason direct him to use the one and avoid the other. And as to the proper quantity of aliment, the rule is, to take just such a proportion as will be sufficient to support and nourish him, but not such as will overload the stomach, and be difficult to digest; yet in this measure also, every individual has a sure guide, if he will be directed by a natural undepraved appetite; for whenever he has eat of any good food, as much as his appetite requires, and leaves off before his stomach is cloyed*, or finishes his meal with some relish for more, he has eat a proper quantity. But to prevent any deception, he may be still farther convinced that he has committed no excess, if immediately after dinner he can write or walk, or go about any other necessary business with

* Vid. Hippoc. aph. sect. 2. aphor. 17. Ubi copiosior præter naturam cibus ingestus fuerit, id morbum creat.

pleasure; and if after supper his sleep shall not be disturbed, or shortened by what he has eat or drank; if he has no head-ach next morning, nor any uncommon hawking or spitting, nor a bad taste in his mouth; but rises at his usual hour refreshed and chearful.

2. ANOTHER useful rule is, that we should not indulge ourselves in a discordant variety of aliments at the same meal. Tho' a good stomach, for example, may make a shift to digest fish, ~~flesh~~, wine and beer at one repast; yet if one adds salad, cream and fruit to them (which is too frequently done) the flatulent mixture will distend the bowels, and pervert the digestion.

3. THE quantity and solidity of a man's aliment ought to bear a just proportion to the strength of his constitution, and to the exercise which he uses: For young, strong, labouring people will turn to good nourishment any kind of food in common use; and they can digest with ease a quantity that would oppress or destroy the delicate and sedentary.

4. BREAD, made of a good wheat flour, properly fermented and baked, is the most valuable article of our diet, wholesome and nourishing by itself, mixing well with all sorts of aliment, and frequently agreeable to the stomach when it loaths every other food.

5. IT is to be observed, that liquid aliments, or spoon meats, are most proper, when immediate refreshment is required after great abstinence or fatigue, because they mingle sooner with the blood than solid aliments,

6. As drink makes a considerable part of our aliment, it may not be amiss here to inquire which sort of common drink, generally speaking, is the most proper to preserve health. " Pure water (says " Frederic Hoffman *) is the best drink for persons of all ages and temperaments. By its fluidity and mildness it promotes a free and equable circulation of the blood and humours through all the vessels of the body, upon which the due performance of every animal function depends; and hence water drinkers are not only the most active and nimble, but also the most chearful and sprightly of all people. In sanguine complexions, water, by diluting the blood, renders the circulation easy and uniform. In the choleric, the coolness of the water restrains the quick motion, and intense heat of the humours. It attenuates the glutinous visciduity of the juices in the phlegmatic, and the gross earthiness which prevails in melancholic temperaments. And as to different ages, water is good for children, to make their tenacious milky diet thin, and easy to digest: For youth and middle aged people, to sweeten and dissolve any scorbutic acrimony, or sharpness that may be in the humours, by which means pains and obstructions are prevented: And for old people, to moisten and mollify their rigid fibres, and to promote a less difficult circulation through their hard and shrivelled pipes. In short, (says he) of all the productions of nature

* Dissert. physico med. vol. 2. dissert. 5.

“ or art, water comes nearest to that universal
 “ remedy or panacea, so much searched after by
 “ mankind, but never discovered.” The truth of
 it is, pure, light, soft, cold water, from a clear
 stream, drank in such a quantity as is necessary to
 quench their thirst, dilute their food, and cool their
 heat, is the best drink for children, for hearty peo-
 ple, and for persons of a hot temperament, espe-
 cially if they have been habituated to the use of it :
 But to delicate or cold constitutions, to weak sto-
 machs, and to persons unaccustomed to it, water
 without wine is a very improper drink *; and they
 will find it so, who try it under such circumstances.

GOOD wine † is an admirable liquor, and, used
 in a moderate quantity, answers many excellent
 purposes of health. Beer well brewed, light, clear,
 and of a proper strength and age, if we except wa-
 ter and wine, is perhaps the most antient, and best
 sort of drink in common use among mankind.

7. IT is necessary to observe, that water or small
 beer, or some other weak liquor, should be drank
 at meals, in a quantity sufficient to dilute our solid
 food, and make it fluid enough to circulate through
 the small blood vessels, otherways the animal func-
 tions will grow languid, and obstructions must
 follow.

* See Hippocrates's opinion on this article, page 106. Sec.

† Plutarch in his life of Cæsar tells us, that when he had taken
 Compiègne, a town in Thessaly, by assault, he not only found provisions
 for his army, but physic also: For there they met with plenty of
 wine, which they drank freely. Warmed with this, and inspired
 with the god, they jollily danced along, and so shook off their disease
 contracted from their former crude and scanty diet, and changed their
 whole constitution.

8. **TEA**, to some, is a refreshing cordial after any fatigue. To some it is useful and seems to assist digestion, drank at a proper distance of time after dinner: But to others it occasions sickness, fainting, and tremors at all times; so that the experience of every individual must determine not only the use or forbearance, but also the strength and quantity of this exotic beverage.

As the nature of **Coffee** is more fiery and active than that of tea, and the frequent use of it may consequently be more dangerous, every man's own experience should direct him how and when to use or forbear it; but the trial should be fairly made with care and caution.

CHOCOLATE is nourishing and balsamic, when fresh and good, but very disagreeable to the stomach when the nut is badly prepared, and is greasy, decayed or rancid.

9. **PERSONS** of tender constitutions should be careful to chew their meat well, that it may be more easily digested.

Of EXERCISE.

As the human body is a system of pipes, through which fluids are perpetually circulating; and as life subsists by this circulation, contrived by infinite wisdom to perform all the animal functions, it is obvious that exercise must be necessary to health, because it preserves this circulation by assisting digestion, and throwing off superfluities. Besides, we see

See every day that the active * are stronger than the sedentary; and that those limbs of labouring men which happen to be most exercised in their respective occupations, grow proportionably larger and firmer than those limbs which are less employed.

1. THREE things are necessarily to be considered with regard to exercise. *First*, What is the best sort of exercise. *Secondly*, What is the best time to use it; And, *thirdly*, What is the proper degree or measure to be used. As to the first, tho' various exercises suit various constitutions, as they happen to be robust or delicate, yet in general that sort is best to which one has been accustomed, which he has always found to agree with him, and in which he takes the greatest delight.

2. IN the second place, the best time to use exercise is when the stomach is most empty. Some cannot bear it quite fasting, and therefore to them exercise is proper enough after a light breakfast, or towards evening when dinner is pretty well digested, but should never be attempted soon after a full meal, by such as are under no necessity to work for their daily subsistence.

3. LASTLY, The measure or proportion of exercise fit for every individual, is to be estimated by the strength or weakness of his constitution: For when any person begins to sweat, or grow weary,

* Julius Cæsar was of a weak and delicate constitution, says Plutarch, which however he hardened by exercise, and drew even from the incommodities of war a remedy for his indispositions, by inuring himself to all sorts of fatigue, and turning even his repose into action.

or short breasted, he should forbear a while, in order to recover himself, and then resume his exercise again, as long as he can pursue that method with ease and pleasure: But if he persists until he turns pale, or languid, or stiff, he has proceeded too far, and must not only forbear exercise for the present, but should also use less next day. In general it is to be observed, that children and old people require much less exercise than those who are in the vigour of life.

4. EXERCISE may properly be divided into three sorts. *First*, That which is performed by the intrinsic powers of our own body only, as walking, running, dancing, playing at ball, reading * aloud, &c. *Secondly*, That which is performed by the powers of some other bodies extrinsic to us, as gestation in wheel machines, horse litters, sedan chairs, sailing, &c. And, *thirdly*, That which partakes of both the former, as riding on horseback, wherein we exercise our own powers by managing our horse, and holding our bodies firm and upright, while the horse performs the part of a vehicle.

WITHOUT entering into the antient disputes of philosophers, about the most healthful of all these sorts, we may venture to affirm in general, that what is performed by our own powers, is the most

* Dr. Andry observes, that singing is a most healthful exercise, and subjoins the following words: "Tanta denique est vocis et loquacitatis in exercendo corpore præstantia, ut id fortasse causa sit, cur feminae non tanto alius exercitio indigent quanto indigent viri, quoniam scilicet sunt illæ loquaciores. *Quæst. medic. An præcipua valetudinis tutela exercitatio?* In *schol. medic. Paris. discussa*, an. 1723, Præsid. Nic. Andry."

proper for persons of a strong and healthy constitution; that what is performed by external helps only, is most proper for the infirm and delicate; and that the exercise performed partly by ourselves, and partly by foreign assistance, is most suitable to such as are neither very robust nor very tender: And as to the particular benefits which arise from riding on horseback, they have been set forth in so rational and lively a manner by Sydenham and Fuller, that nothing material can be added to their arguments; and it has been already observed, that whatever advantage can be received from a good digestion, may in an eminent degree be expected from this exercise, adjusted accurately to the strength of the rider.

5. **AFTER** exercise we run a great risk of catching cold, (especially if we have been in any degree of sweat) unless we take care to prevent it, by rubbing our bodies well with a dry cloth, and changing our linen, which should be previously well aired: But of all the follies committed immediately after exercise, the most pernicious is that of drinking small liquors of any sort quite cold, when a man is hot; whereas if we drank them blood warm, they would quench our thirst better, and could do us no injury.

6. **LEAN** people are sooner weakened and wasted by too much exercise than those who are plump: And every man should rest for some time after exercise, before he sits down to dinner or supper.

Of SLEEP and WAKEFULNESS.

1. SLEEP and wakefulness bear a great resemblance to exercise and rest; as wakefulness is the natural state of action, in which the animal machine is fatigued and wasted, and sleep the state of ease, in which it is refreshed and repaired. The vicissitude of sleeping and waking is not only necessary but pleasing to our nature, while each is confined within its proper limits. But you will ask what limits should be assigned to sleep? The answer is, that tho' different constitutions require different measures of sleep, yet it has been in general observed, that six or seven hours are sufficient for youth or manhood, and eight or nine for infancy or old age, when they are strong and healthy, but the infirm are not to be limited; and the weaker any person is, the longer he ought to indulge himself in such a measure of sleep as he finds by experience sufficient to refresh him.

2. MODERATE sleep increases the perspiration, promotes digestion, cherishes the body, and exhilarates the mind; and they whose sleep is apt to be interrupted by slight causes, should nevertheless keep themselves quiet and warm in bed, with their eyes shut, and without tossing or tumbling, which will in some degree answer the purposes of a more sound sleep.

3. EXCESSIVE sleep, on the other hand, renders the body phlegmatic and inactive, impairs the memory, and stupifies the understanding. And excessive

five wakefulness dissipates the strength, produces fevers, dries and wastes the body, and anticipates old age.

4. He who sleeps long in the morning, and sits up late at night, inverts the order of nature, and hurts his constitution, without gaining any time; and he who will do it merely in compliance with the fashion, ought not to repine at a fashionable state of bad health.

5. A man should forbear to sleep after dinner, or indeed at any other time of the day in our cold climate, except where a long habit has rendered such a custom almost natural to him, or where extraordinary fatigue, or want of rest the preceding night, obliges him to it; in which case he should be well covered to defend him against catching cold.

6. Two hours or more should intervene between supper and the time of going to bed: And a late heavy supper is a great enemy * to sleep, as it disturbs that sweet tranquillity of the body and mind, which is so refreshing to both.

Of REPLETION and EVACUATION.

1. THE whole art of preserving health may properly enough be said to consist in filling up what is deficient, and emptying what is redundant, that so the body may be habitually kept in its natural state; and hence it follows, that all the supplies

* Somnus ut sit levis, sit tibi cœna brevis. Schol. Salern.

from eating and drinking, and all the discharges by perspiration, and by the other channels and distributions of nature, should be regulated in such a manner that the body shall not be oppressed with repletion, or exhausted by evacuation. Of these two, one is the cure or antidote of the other; every error in repletion being corrected by a seasonable and congruous evacuation; and every excess in evacuation (if it has not proceeded too far) being cured by a gradual and suitable repletion.

2. **WHEN** any repletion has been accumulated, it requires a particular and correspondent evacuation, well known to physicians. Repletion, for instance, from eating or drinking, requires a puke or abstinence. A fulness of blood requires immediate venæsection. A redundancy of humours requires purging. And a retention of any excrementitious matter, which should have been discharged by sweat, urine, or spitting, requires assistance from such means as are found by experience to promote these several evacuations. And if those cautions are neglected, there will succeed an oppression of the stomach or breast, a weight of the head, a rupture of the blood vessels, or some other troublesome disorder.

3. It is to be observed that a person in perfect health, all whose secretions are duly performed, ought never to take any medicine that is either evacuating or acrimonious, because it may disturb the operations of nature without any necessity; and

Hippocrates

Hippocrates expressly declares *, that those who are of a strong and healthy constitution are much the worse for taking purges †. But as to external ablutions of the skin, by washing, bathing, or swimming, they are proper for healthy people, provided they are not carried to excess.

4. It also is to be observed, that chewing or smoking tobacco soon after meals, generally destroys the appetite, and hurts the constitution, both by weakening the springs of life, (as other opiates do) and by evacuating the saliva which nature has appointed to fall into the stomach to promote digestion.

5. NOTHING exhausts and enervates the body more, or hurries on old age faster than premature concubinage; and hence the ancient Germans ‡ are extolled by Tacitus for not marrying before they arrived at their full vigour.

Of the PASSIONS and AFFECTIONS of the mind.

1. HE who seriously resolves to preserve his health, must previously learn to conquer his passions, and keep them in absolute subjection to reason; for let a man be ever so temperate in his diet, and regular in his exercise, yet still some unhappy

* Sect. 2. aphor. 36, 37.

† It is to be observed that the purges used in Hippocrates's time were all somewhat violent.

‡ Tarda illis venus, et pares validique miscebantur. De mor German.

passions, if indulged to excess, will prevail over all his regularity, and prevent the good effects of his temperance; it is necessary therefore that he should be upon his guard against an influence so destructive.

2. FEAR, grief, and those passions which partake of them, as envy, hatred, malice, revenge, and despair, are known by experience to weaken the nerves, retard the circular motion of the fluids, hinder perspiration, impair digestion, and often to produce spasms, obstructions, and hypochondriacal disorders. And extreme sudden terror * has sometimes brought on immediate death.

3. MODERATE joy and anger, on the other hand, and those passions and affections of the mind which partake of their nature, as cheerfulness, contentment, hope, virtuous and mutual love, and courage in doing good, invigorate the nerves, accelerate the circulating fluids, promote perspiration, and assist digestion; but violent anger (which differs from madness only in duration) creates bilious, inflammatory, convulsive, and sometimes apoplectic disorders, especially in hot temperaments; and excess of joy destroys sleep, and often has sudden and fatal † effects.

4. It is observable, that the perspiration is larger from any vehement passion of the mind when the body is quiet, than from the strongest bodily ex-

* See Valer. Maxim. who mentions several such instances.

† Vid. Plin. hist. nat. lib. 7. cap. 53. Aul. Gell. Noct. Attic. lib. 3. cap. 15.

ercise when the mind is composed. Those therefore who are prone to anger, cannot bear much exercise, because the exuberant perspiration of both would exhaust and waste the body. It is also remarkable, that a disorder which arises from any vehement agitation of the mind, is more stubborn than that which arises from violent corporal exercise, because the latter is cured by rest and sleep, which have but little influence on the former.

5. A constant serenity, supported by hope, or cheerfulness arising from a good conscience, is the most healthful of all the affections of the mind. Cheerfulness of spirit, (as the great lord Verulam observes) is particularly useful when we sit down to our meals, or compose ourselves to sleep; because anxiety or grief are known to prevent the benefits which we ought naturally to receive from these refreshments: “ If therefore, says he, any violent
 “ passion should chance to surprize us near those
 “ times, it would be prudent to defer eating, or
 “ going to bed, until it subsides, and the mind re-
 “ covers its former tranquillity.”

HAVING thus mentioned the principal rules relating to the *Six things necessary to life*, considered singly, I shall here subjoin a very important rule, which considers two of the six together, and shews the mutual influence which they have one upon the other, with respect to health. The rule is, that our exercise should bear an exact proportion to our diet, and our diet in like manner to our exercise; or, in other words, that he who eats and drinks plentifully should use much exercise; and

he who cannot use exercise should, in order to preserve his health, live abstemiously. Persons who can use moderate and constant exercise, are able to digest a large quantity of aliment, without any injury to their health, because their exercise throws off whatever is superfluous; but tender people, who can use little or no exercise, if they should take in a large quantity of food, some indigested superfluity must remain in the body, which becomes a perpetual source of distempers. Hippocrates looks upon this rule of adjusting our diet to our exercise as the most important in the whole art of preserving health, and has taken particular care to recommend it, as we have seen before.

BUT one caution I must here recommend, which is less attended to than it deserves, *viz.* when a man happens to be much fatigued and spent after a hard journey or violent exercise, and stands in need of immediate refreshment, let him eat things that are light and easy to digest, and drink some small liquor warm; for heavy meat and strong drink will increase the artificial fever (if I may so call it) which violent exercise raises in the blood, and will rather waste than recruit his strength and spirits.

BESIDES those appertaining to the six things already mentioned, there are three other general rules greatly conducive to the preservation of health, which must not be forgotten:

THE first rule is: Every excess is an enemy to nature. Whether it be in heat or cold, in grief or joy, in eating or drinking, or in any other sensual gratification, excess never fails to disorder the body; whereas,

whereas, to be moderate in every affection and enjoyment, is the way to preserve health.

RULE the second: It is dangerous suddenly * to alter a settled habit or an old custom, and to fly from one extreme to another. Even those things which are in themselves bad, as *dram-drinking*, *chewing tobacco*, *sitting up late at night*, *sleeping immediately after dinner*, *morning whets* as they are called, &c. when by long use they have unhappily grown familiar to any person, must not be broke off all at once, but should be relinquished by degrees.

THE third rule is, that whatever tends to impair our strength, should be carefully avoided. To bleed often, for instance, without an urgent cause; to take strong purges or vomits; to go into a slender and vegetable diet rashly, and rather from whim than necessity: All such errors as these, I say, change the small pipes, through which the circulation is performed, into impervious cords, and impair the strength by drying up the conduits of life.

HAVING thus taken notice of the general rules to be observed by all, let us in the next place consider the particular rules appropriated to the various temperaments, ages, and conditions of men.

* Semel multum et repente vel evacuare, vel replere, vel calefacere, vel refrigerare, aut alio quovis modo movere, periculosum. Hippoc. aph. lect. 2. aph. 51.

C H A P. III.

Of the different temperaments of the human body, viz. the choleric, the melancholic, the phlegmatic, and the sanguine, with the rules of health relating to them, and some inferences deduced from them.

TO be acquainted with the temperaments of men is of no small importance to health. Hippocrates* says, “ that the human body contains four humours very different with respect to heat, cold, moisture, and dryness, viz. blood, phlegm, yellow bile, and black bile; which several humours are frequently brought up by vomiting, and discharged by stool; that health consists in a due mixture of these four; and that disorders are produced by a redundancy in any of them.” Upon this observation of Hippocrates, the four principal temperaments of choleric, melancholic, phlegmatic, and sanguine, have been established. But Galen †, too fond of subtilties and divisions, has reckoned up nine temperaments, viz. four simple, the hot, the cold, the moist, and the dry; four compound, the hot and moist, the hot and dry, the cold and moist, the cold and dry; and one moderate or healthy temperament, consisting in a mediocrity that leans to no extreme.

THESE two great men, and their respective followers, mean nearly the same thing, tho’ they dif-

* De natur. horn. pag. 225, 226.

† De temperament. lib. 2. cap. 1.

fer in words; for the choleric of Hippocrates and his adherents has a great affinity with the hot and dry temperament of Galen; the phlegmatic with the cold and moist; the melancholic with the cold and dry; and the sanguine of the one with the moderate temperament of the other; it will not therefore be of so great moment to determine which division we should adopt, as it will be to give a just notion of these temperaments, consistently with the laws of circulation, to which the ancients were strangers. To form therefore a distinct idea of the different temperaments which Hippocrates points out, (for I chuse to follow him) it will be necessary to consider what change is produced in the whole mass of fluids, by the prevailing humours from which these temperaments take their names, and what effect this change has upon the human body and mind.

IN choleric * temperaments, or in bodies abounding with yellow bile, the blood is hot and thin, moves with great rapidity through the pipes, disposes the body to inflammations and acute distempers, and the mind to a promptness and impetuosity in all its deliberations and actions. Persons of this temperament ought to avoid all occasions of dispute, strong liquors, violent exercise, and every thing by which they are apt to be overheated.

IN melancholic temperaments, where persons

* Vid. Hoffm. dissert. de temperamento, fundamento morborum et morborum in genibus.

abound with a gross, earthy, austere humour, called by the antients black bile, the blood is heavy and thick, moves slowly, disposes the body to glandulous obstructions, and lowness of spirits, and the mind to fear and grief. To such persons a healthy air, moderate exercise, light food, a little good wine, which should be mixt with water for common drink, and chearful company, are the best means to preserve health.

IN phlegmatic temperaments, where there is a large proportion of a watery tenacious mucilage, the slimy blood moves languidly, disposes the body to white swellings and dropical disorders, and the mind to stupidity and sloth. In this temperament, a diet moderately attenuating, constant exercise, and some warm gentle physic at proper times, will prevent bad disorders.

IN sanguine temperaments, where there is no redundancy of bile or phlegm, the blood (except in cases of fulness from high living, or inanition from hæmorrhages) circulates freely and equably through all the vessels, which disposes the body to health and long life, and the mind to chearfulness and benevolence. The principal care of such persons should be, by a moderate and prudent use of all the necessaries of life, to avoid the extremes of plenitude and voluptuousness, and every sort of intemperance which may spoil a benign and healthy constitution.

It is true, that these temperaments are not easily distinguished at first sight, in every individual; but a considerate man may, by observation
and

and experience, discover which temperament he himself principally partakes of, and consequently may, by proper precautions, obviate any inconvenience apt to arise from it.

FROM what has been said of these different temperaments, it will clearly follow, first, That there can be no such thing contrived by man, as an universal remedy to prevent or remove all sorts of complaints, because that which would agree with the hot, must disagree with the cold. Besides, all such boasted specifics have been found ineffectual from experience, and every pretender to them has been convicted either of ignorance or dishonesty. In a word, none but he who had skill to create the human body, can contrive a specific for all distempers; and I am fully persuaded, that except the *tree of life*, there never was, nor will be an universal panacea.

IT follows, secondly, That we cannot with certainty promise for any particular aliment, or any kind of medicine, that it will agree with this or the other individual, until we are acquainted with his peculiar temperament; and consequently, that it is absurd to prescribe a method of diet or physio for any man, without such a previous knowledge.

AFTER this short sketch of the temperaments, we come next to take a view of those rules of health which are peculiar to the different periods of life.

C H A P. IV.

Of infancy, youth, manhood, and old age; together with the precepts of health peculiar to each of them.

HAD the philosopher, "whom Aulus Gellius * introduces declaiming against the unnatural behaviour of mothers, who neglect to suckle their own children," lived in our days, and known that men of rank and fashion frequently chuse their wives not for the graces of their person, or the virtues of their mind, but only for the largeness of their fortune, he would perhaps, in compassion to the infant, have preferred a healthy discreet nurse to a weakly capricious mother. Such parents therefore as have not taken care, by their own temperance, good humour and health, to secure a vigorous and happy constitution to their children, may surely be permitted to make up that deficiency as well as they can, in the choice of a proper nurse.

THE first care to be taken of the infant, (in case the mother should not be fit for the momentous task) is to chuse a virtuous, healthy, cheerful, cleanly, and experienced nurse. Her milk should be white, sweet, and of a good flavour, untainted

* Lib. 12. cap. 1. Oro te, inquit, mulier, sine eam totam integram esse matrem filii sui; quod est enim hoc contra naturam imperfectum atque dimidiatum matris genus, peperisse, ac statim ab se abjecisse? aluisse in utero sanguine suo. nescio quid, quod non videret: non alere nunc suo lacte quod videat, jam viventem, jam hominem, jam matris officia implorantem?

with any foreign taste or smell, between two and six months old, and of a thin rather than a thick consistence. The child's other food should be simple, and of very easy digestion; his cloaths should neither be strait nor too warm, and the nurse should be discharged from using pins in dressing him, where there can be any danger of pricking his skin; and she must give as much as he can bear of air and exercise.

To prevent rickets, scrophulous disorders, coughs, and broken bellies, to which children are very liable in this island, the most likely means would be to introduce the custom of dipping their whole bodies every morning in cold water, after which they should be immediately rubbed dry and dressed; deferring nevertheless the commencement of this practice for some months, or to the next summer after the infant is born, lest there should be too quick a transition from the warmth in which the fœtus was formed, to the extreme coldness of the water. If the infant becomes warm and lively upon rising out of the bath, there can be no danger in this immersion; but in case he should remain chilly and pale for a considerable part of the day, the use of the cold bath must be laid aside for some time, and may be tried again when the child grows stronger.

WHEN the first dawn of reason appears in children, the parents should take the earliest care possible to make their minds obedient to discipline, and “ gradually * instil into them that great prin-

* Locke on education.

“ ciple (as Mr. Locke calls it) of all virtue and
 “ worth, viz. to deny themselves their own de-
 “ sires, and purely follow what reason dictates as
 “ best, tho’ the appetite should lean the other
 “ way. We frequently see parents, by humouring
 “ them when little, corrupt the principles of na-
 “ ture in their children, and wonder afterwards to
 “ taste the bitter waters, when they themselves
 “ have poisoned the fountain; why should we
 “ think it strange, that he who has been accus-
 “ ed to have his will in every thing when he was
 “ in coats, should desire it, and contend for it,
 “ when he is in breeches?”

AND in this our judicious author has adopted or confirmed the remark which the admirable Quintilian made long before him, part of whose words † I have quoted at the bottom of the page; and indeed we frequently see, that those indulgences to the child have grown into settled habits, and proved the ruin of the man, with respect both to his health and his morals.

OF Y O U T H.

THE diet of youth should be indeed plentiful, as Hippocrates advises ‡, but simple, and of easy digestion; because food which cannot be well digested breeds gross humours, and imperceptibly lays a foundation for scurvy, stone, rheu-

† Utinam liberorum nostrorum mores ipsi non perderemus, infantiam statim deliciis solvimus. Mollis illa educatio, quam indulgentiam vocamus, nervos omnes et mentis et corporis fragit —
 ‡ Fit ex his consuetudo, deinde natura. Instit. orat. lib. 1. cap. 2.

‡ Sect. 1. aph. 13,

matism, and other very bad distempers. Wine also, or strong drink, should never, or very sparingly, be allowed to youth. They should be kept intirely from unripe fruit, and from too much of what is ripe. Their exercise should be moderate, for too little would bloat them and make them short breathed; and too much would waste their strength. Too much sleep also (like too little exercise) would stupify them, and too little would render them thin and subject to fevers.

BUT, above every other care and consideration, youth is the most proper season to inure the mind to the practice of virtue, upon which their future health and reputation must depend, and without which it will be impossible to deliver their constitutions unbroken to manhood and old age. Many vices are absolutely inconsistent with health, which never dwells where lewdness, drunkenness, luxury, or sloth, have taken possession. The life of the rake and epicure is not only short but miserable. It would shock the modest and compassionate to hear of those exquisite pains and dreadful agonies which profligate young persons suffer under the reiterated courses of their debauchery, before they can reach the grave into which they often hurry themselves: Or, if some stop short in their career of riot, before they have quite destroyed the springs of life, yet these springs are generally rendered so feeble and crazy by the liberties which they have already taken, that they only support a gloomy, dispirited, dying life, tedious to themselves, and troublesome to all about them; and
(which,

(which is still more pitiable) often transmit their complaints to an innocent unhappy offspring.

THE expediency of virtue towards the preservation of health, is no new doctrine with those who studied and recommended that art; it was taught many ages ago by Galen, who, speaking of youth, expresses himself in the manner following: "This * is the proper season to discipline the mind, and train it up in virtuous habits, especially in modesty and obedience, which will prove the most compendious method to attain whatever may be necessary towards the health of the body in the future periods of life."

BUT how shall giddy youth, hurried away by strong appetites and passions, be prevented from running into those excesses which may cut them off in the prime of their days, or at least hoard up diseases and remorse for old age? I answer, that their passions and appetites must be restrained early by proper discipline and example. This is to be done by their parents, whose first care should be to train up their children at home in "the way they should go, that when they are old they may not depart from it."

IN the next place, such as can afford their sons a liberal education, ought to send them, for instruction and example, to those seminaries of learning where religion and virtue are held in the highest esteem, and practised with the greatest care and decency; for such an education will not only prove

* De san. tuend. lib. 1. cap. 12. Vide insuper ejusdem libellum de cognoscend. et curand. animi morbis. cap. 7.

a benefit to the youth themselves, but a blessing also to the community, which is always ready to imitate as well the good as the bad example of their superiors.

WE have reason to felicitate our youth upon the many opportunities which they have of a virtuous education in the excellent universities of Great Britain. Oxford is certainly one of the most commodious residences for study on the face of the earth. I was never so charmed with any place of public resort as I was with that university. *There* religion, learning, and good manners appear in all their beauty. *There* ignorance, vice, and infidelity are reputed clownish and contemptible: And *there* the Virtues and the Graces are united, or, in other words, the knowledge of the scholar is joined with the politeness of the gentleman. I never indeed had the good fortune to be at Cambridge; but from the great and good men which that university has produced, it is reasonable to conclude, that she is not inferior to her sister of Oxford. Nor have the several universities of Scotland been at any time destitute of masters or scholars, conspicuous for genius, literature or virtue.

THOSE gentlemen, therefore, who send their sons abroad for a foreign education, before they are grounded in virtue and learning at our own universities, seem to have no great value for the *future health and dignity of their children*, or (give me leave to add) for the *prosperity of their country* *.

Of

* "What can be expected from those young adventurers, but

OF M A N H O O D.

To this period belong all the general rules of health before mentioned, and, in a word, all these rules that are not distinctly appropriated to infancy, youth, or old age.

THE best security to health in this period is the good habit of temperance and moderation, transmitted to it from childhood and youth; for a man arrived to the perfect use of his reason, is not very apt (unless he lays reflexion quite aside) to indulge any vicious appetites over which he had an absolute command in the former part of his life.

It is also reasonable to expect that a person will, in this period, attend to the temperament most predominant in himself, whether it inclines to the choleric, melancholic, phlegmatic or sanguine, and will regulate his way of living in such a manner that his peculiar temperament shall be kept within the bounds necessary to the conservation of health; or (which is the same thing) that he will be careful to avoid whatever he finds by experience to be detrimental to his health, and will persist in the use of such things as he finds by the same experience and observation to agree with him; seriously reflecting how easy it is either by a supine indolence, or by criminal excesses, to destroy even a good constitution in the prime and vigour of life, beyond the possibility of repair:

an importation of all the follies, fopperies, vices, and luxuries of the several countries through which they have passed." Sheridan on British education, book 1. chap. 2. page 32, 33.

Of this unhappy conduct too many sad examples fall within the circle of every man's acquaintance.

OF OLD AGE.

HEALTH is an invaluable blessing in age, when the judgment arrived at full maturity, displays more strength and beauty than ever it did before; and therefore it should be secured, as far as lies in our power, by a diligent observation of the following plain rules, which point out to the aged, first what they ought to avoid, and secondly what they ought to pursue.

In the first place, old people must be careful to avoid whatever they have by experience found always hurtful to them in the former part of their lives, for age is not the proper season to struggle with new or unnecessary evils. They must also shun every excess that has a natural tendency to impair their remaining strength; for tho' men may sometimes escape the bad effect of those excesses in the vigour of life, old age would quickly be demolished by them; such are too much care and anxiety about wealth, an over assiduous application to study, habitual fretfulness; or, in a word, whatever is known to weaken * a good constitution.

Secondly, As to what they ought to pursue. Old men should be careful to practise the following im-

* Excessive Venery enervates old men extremely. The Adventurer, in one of his admirable essays, humorously applies to them what Virgil reports of his fighting bees, *animasque in vulnere possunt*.

obliged to be careful in the management of their health, live more comfortably, and longer than those of a robust constitution, who, from a vain confidence in their vigour, are apt to despise all rules and order.

As to external circumstances; those who, by birth or acquisition, are possessed of a fortune which makes them able, and of a disposition which makes them free to live as they please, having it in their power to put every rule in practice that can conduce to the preservation of their health, are to blame if they neglect so great a blessing, which every man will know the value of when once he has lost it.

THOSE again, who either by choice are engaged to serve the public, or by poverty obliged to serve private families, and are not at liberty to bestow much time or care on their health, must make the best use they can of such opportunities as their engagements will afford them. Every condition has some vacant hours, which may be employed to the purpose of health. “The emperor Antoninus, says Galen, who dispatched so much business in the day, began his exercise always about sun-set.” It is important for a statesman to observe, that “the more business he has been fatigued with upon any particular occasion, the more temperately he ought to live;” and that he should not at such times, eat any thing hard of digestion, or drink more wine than what is just sufficient to refresh him.

It is moreover to be observed, that persons of all

all ranks who eat and drink freely, and are at the same time so much confined by their employments, as to be able to use little or no exercise abroad, should be sure to use some exercise within doors, of which a great variety may be contrived to every man's taste, as shuttle-cock, billiards, hand-ball, dumb bell, &c. and should also frequently chafe his body with a flesh brush in the morning, and now and then take some very gentle physic, to carry off what may remain indigested in his stomach and bowels.

To conclude, the poor, if they are virtuous and cleanly, have great advantages over the rich, with respect to health and long life, as the narrowness of their circumstances prompts them to labour, and withdraws all temptations to luxury.

C H A P. VI.

Of the prophylaxis, or ways to prevent approaching distempers.

IN the beginning of this second part I observed, that the art of preserving health might be divided into three branches, whereof the first points out the rules calculated to maintain the health we enjoy at present. The second treats of the best method to prevent distempers; and the third directs the way to long life. I have already spoke of the first branch. The precepts which relate to the two following will be but few.

WHEN distempers are perceived to make their approach, they should be prevented, by removing

N

“ their

their causes as soon as possible. " A man, says
 " Galen *, seems to be in a middle state between
 " health and sickness, when he has some slight
 " ailment that does not confine him to bed or from
 " business, such as an inconsiderable head-ach, loss
 " of appetite, some unusual weariness, weight or
 " drowsiness: but it is the part of a wise man to
 " prevent those small disorders from growing worse,
 " by correcting without delay the disposition by
 " which they are propagated. If, for example,
 " the beginning complaint arises from too great a
 " fulness, that fulness should be diminished by
 " abstinence, or (if abstinence is not sufficient) by
 " bleeding, purging or sweating. If it arises from
 " crudities, and indigestion, the remedy to pre-
 " vent its growing worse, is to keep one's self
 " warm, to live abstemiously and quietly for some
 " days, and to drink a little good wine to strengthen
 " the stomach. And in general we should endea-
 " vour (continues he) to remove the present slight
 " complaint by pursuing a method, in its ten-
 " dency and effects directly contrary to the cause
 " which produced that complaint; or, in other
 " words, thick humours must be attenuated;
 " acrimonious and redundant humours corrected
 " and discharged; crude humours concocted; con-
 " tractions relaxed, and obstructions opened."

WHEN a beginning cold or cough threatened
 an impending fever, the sagacious Sydenham fre-
 quently † removed the cough, and prevented the
 fever, by prescribing air and exercise, and a cool-

* De medic. art. constitut. cap. 19.

† De tuss. epidem. pag. 207, 208.

ing ptisane for drink, together with abstinence from flesh meat, and strong liquors.

BOERHAAVE, who had studied all the ancient and modern physicians of any reputation, and knew perfectly well how to extract what was most useful from their several writings, has, in his Prophylaxis † recommended the three following excellent precepts to prevent distempers.

1. As soon as we perceive, from certain symptoms, says he, that any distemper is approaching, we should prevent it, by pursuing a method opposite to the cause which is likely to produce it: And this method chiefly consists in using the following means, viz. We must, in the first place, practise
 “ abstinence and rest, and drink several draughts
 “ of warm water. We ought, in the next place,
 “ to use some moderate exercise, and persist in it
 “ until a gentle sweat begins to break out; after
 “ which we should immediately go into a warm
 “ bed, and there indulge a free perspiration, and
 “ sleep as long as conveniently we can; for it is
 “ obvious that by these means the vessels are re-
 “ laxed, gross humours are diluted, and noxious
 “ humours discharged; and thus impending dis-
 “ tempers are prevented by removing their causes.

2. “ To guard against distempers in general,
 “ there cannot be a more useful precaution in our
 “ climate, than to keep up a free and uniform
 “ perspiration by not laying aside our winter gar-
 “ ments before a warm May; and by putting
 “ them on again before a cold November.

† Instit. medic. sect. 1049.

3. " IN summer (continues he) our diet should
 " be light, soft, and mild; our drink cooling;
 " and our exercise gentle. In winter, on the con-
 " trary, our food ought to be solid, dry and savoury,
 " warmed with a little good wine; and the exer-
 " cise vigorous. In spring and autumn the ali-
 " ment and exercise should keep a medium be-
 " tween both, but leaning to those of summer
 " or winter, as one is more or less affected with
 " the heat or cold."

To the directions of these great men, I shall
 subjoin a simple and easy method of preventing
 impendent distempers, frequently practised with
 good success, *viz.* When you find yourself indis-
 posed, go directly to bed, and there lye for one,
 two, or three days, until your complaints are re-
 moved; living all the while on water gruel or pa-
 nada for food; and on water or small warm
 negus, or white wine whey for drink. Your gruel
 or panada may be made more or less substantial as
 you require them. This is very nearly the advice
 of Celsus, an author of no mean reputation,
 whose sentiments * to the same effect, expressed
 with assurance of success, may be seen at the
 bottom of the page.

AND tho' some may deride the simplicity of

* *Igitur si quid ex his (notis futuræ adversæ valetudinis) incidit
 omnium optima sunt quies et abstinentia: si quid bibendum, aqua,
 idque interdum uno die fieri satis est; interdum, si terrentia ma-
 nent, bibeo: proximeque abstinentiam sumendus cibus exiguus,
 bibenda aqua, postero die etiam vinum, deinde alternis diebus, mo-
 do aqua, modo vinum, donec omnis causa metus finiatur. Per
 hæc enim sæpe instans gravis morbus discutitur. Neque
 dubium est, quin vix quisquam, qui non dissimulavit, sed per hæc
 morbo mature occurrit, ægrotet. Lib. 3. cap. 2.*

this.

this prescription, they will find that where such food agrees with the stomach, and time can be spared to make the experiment, it will prove more beneficial than they may imagine. I have been often told by a lady of quality, whose circumstances obliged her to be a good oeconomist, and whose prudence and temperance preserved her health and senses unimpaired to a great age, that she had kept herself out of the hands of the faculty many years, by this simple regimen. Gruel indeed is a very insipid diet to a person of a nice palate. Plutarch, in his life of Lycurgus, tells that one of the kings of Pontus, who loved good eating, having heard great encomiums made on the *black broth of Sparta*, hired a cook from that city. But when he came to taste this celebrated dish, he called immediately for his cook, and with some warmth told him, that it was a vile abominable mess. To which the other modestly replied, *Sir, to make this broth relish well, a man must bathe himself in the river Eurotas* *.

C H A P. VII.

Of longevity.—The natural marks of it.—The means of attaining it.—The rise and fall of the transfusion of blood from one animal into another. The conclusion.

I HAVE already observed, that when the continual attrition of the solids and fluids of the

* A river of Laconia, running by Sparta, so that *to bathe in Eurotas*, means *to imitate the discipline and temperance of the Lacedaemonians*.

human body against each other, is hurried on with violence, death must advance hastily, and arrive early; but when it is performed with moderation, the springs of life last longer, and death is more slow in its approaches.

LONGEVITY may proceed either from nature or from art; but chiefly from their happy conjunction.

THE natural marks by which we discern that a man is made for long life, are principally as follows:

1. TO be descended, at least by one side, from long lived parents.
2. TO be of a calm, contented, and chearful disposition.
3. TO have a just symmetry, or proper conformation of parts; a full chest, well formed joints and limbs, with a neck and head large rather than small in proportion to the size of the body.
4. A firm and compact system of vessels and stamina, not too fat; veins large and prominent; a voice somewhat deep; and a skin not too white and smooth.
5. TO be a long and sound sleeper.

THE great assistance which art affords towards attaining long life, arises from the benefit of good air * and good water †, from a frugal and simple diet,

* Brasiliæ salubritatis fama non paucos olim senes, aliosque minus prosperâ utentes valetudine, ex Hispania, et Indiis, aliisque distantibus locis, excivit ad aerem et aquas has cælo datas, tanquam ad deo validissima præsidia vitæ et valetudinis. Perquam maturè enim pubescunt incolæ: senescunt tarde, idque sine canitie aut calvitio. Quo fit, quod longè ultra centesimum ætatis annum, vivat senectâ,

diet, from the wise government of our appetites and passions, and, in a word, from a prudent choice and proper use of all the instruments of life, and rules of health, of which we have spoke before.

BUT some of the moderns have gone farther, and recommended new and bold methods to prolong life, which the antients either had not perspicacity to discern, or wanted resolution to practise. The comprehensive and exalted genius of lord Verulam was not to be limited by common rules. He advises old people “once every two years to change their whole juices, and render themselves very lean by a course of abstinence and proper diet-drinks, in order to sweeten their blood and renew their age.” And Boerhaave*, who like the industrious bee collected honey from every flower, adopts his lordship’s opinion with some small amendment; for, speaking of the most proper diet

non Americani tantum, sed et ipsi Europæi fruuntur, totumque adeo territorium *Macrchiæ* diti mereatur. Guist. Pisonis hist. nat. et medic. Brasilæ. continentis.

† Audio in Ægypti locis homines vivere longiorem vitam quam alibi, (dicit Melchior Guilandinus) quando ipsorum permulti annos plus centum vivunt: communis fere omnibus iis habitaculis vitæ annorum nonaginta solet esse.—Aquæ Nili fluminis claræ factæ, dulces, tenuissimæ, splendidissimæ atque levissimæ existunt, ita ut celerrimè corporis viscera permeent. Audio etenim (quod olim, cum Cayri moram facerem, etiam observavi) in singulis fere corporibus ab ipsis epotia aquis statim vel copiosas urinas, vel sudores, vel per alvum dejectiones observari, atque in hypochondriis nullam fluctuationem ab ipsis ostendi: loquor de iis quæ Cayri habentur et potantur, quando Alexandriæ aquæ consent substantiâ crassiori, quæ pessimæ existunt, tardissimèque viscera permeant. Confirmo tuam sententiam, (respondet Alpinus) atque me in omnibus corporibus observasse, citissime illas aquas Cayri claræ factas, vel per alvum, vel per urinam, vel sudorem exiisse. Prosper Alpinus de medic. Ægypt. lib. 1. cap. 11. et 12.

* Instit. med. nam. 1059—1062.

to attain longevity, he expresses himself in the manner following; "Great abstinence, or an extremely slender, drying and emaciating diet now and then, but very rarely put in practice, is of wonderful use to attain longevity." And a little lower he explains his meaning more perspicuously, by telling us, that "a radical, or almost total change of the humours by resolvent medicines, and a succeeding discharge of them out of the body, such as happens under a course of mercury, or under a course of attenuating, drying, and sudorific decoctions, often dispose the body in an admirable manner, to expel old distempered humours, and to fill the vessels with fresh vital juices." And thus art, conducted with prudence, may effectually lead to long life.

BUT how far this method of renewing their age may be safely practised by old people, I will not take upon me to determine, since the success must, in a great measure, depend upon the goodness of their stamina, the strength and perseverance of their resolution, and the skill of the artist who conducts the regimen. And though this and the following brave but unsuccessful effort to prolong life, discover a quick penetration and a laudable boldness of the human mind; yet a sure and easy road to longevity, different from the general rules of health already mentioned, seems to be among the desiderata in our art, the discovery of which is reserved, perhaps, for a more meritorious generation.

ABOUT

ABOUT a hundred * years ago, a new and gallant effort was made to mend distemperéd constitutions, and consequently to prolong life, by supplying the human body with young and healthy blood from other animals.

THE first hint of this great attempt was given at Oxford *anno* 1658, by Dr. Christopher Wren, Savilian Professor of astronomy there, who proposed to the honourable Mr. Boyle, a method of *transfusing* liquors into the veins of living animals.

In 1666 his hint was farther improved, at the same perennial source of ingenuity and learning, by Dr. Richard Lower, who invented the method of *transfusing* blood out of one animal into another.

HE was followed by several ingenious men at London, and particularly by Dr. Edmund King, who rendered Lower's method of transfusion still more easy and commodious. And as it was intended by the royal society that those trials should be prosecuted to the utmost variety which the subject would bear, by exchanging the blood of old and young, sick and healthy, fierce and timid animals; various experiments were accordingly made with surprizing effects upon lambs, sheep, dogs, calves and horses, &c.

FROM England this invention passed into France and Italy, where after old, decrepid and deaf animals had their hearing, and the agility of their limbs, restored by the transfusion of young and healthy blood into their veins, and other wonderful

* See the original transactions of the royal society, vol. 1.

cures had been atchieved, J. Denis, doctor of phy-
sic at Paris, with the assistance of Mr. Emeretz, ven-
tured to perform the operation on men in that city:
And Johann. Gulielm. Riva *, a surgeon of good
reputation, made the same experiments at Rome.

AFTER some trials, Monsieur Denis published
one account of a young man that was cured of an
uncommon lethargy, (subsequent to a fever in
which he had been blooded twenty times) by *trans-*
fusing the arterial blood of a lamb into his veins:
And another account of the cure of an inveterate
and raging phrenzy performed on a man thirty-four
years old, by *transfusing* the arterial blood of a calf
into his veins, in the presence of several persons of
quality and learning.

THIS daring enterprize having succeeded so well
at the first setting out in France, it was also prac-
tised in England from the arteries of a young sheep,
into the veins of one Mr. Arthur Coga, November
the 23d, *anno* 1667, at Arundel-house, before a
splendid company, by Dr. Edmund King, and Dr.
Richard Lower. And Coga published, under his
own hand, an account of the great benefit which he
received from the operation. But unfortunately
this *transfusion* happened to be soon after performed
in France and Italy with bad success on some per-
sons of distinction †; by which unhappy accidents
the

* Vide Merklin. de ortu et occasu transfus. sang. edit. Norimberg,
anno 1679.

† It was imprudently and fatally tried in France on baron Bond,
son to the first minister of state in Sweden, after he was given over
by

the practice (being yet in its infancy, and unsupported by a sufficient number of experiments) fell into discredit, and was prohibited by the king's authority in France, and by the pope's mandate at Rome.

THUS was defeated a noble essay, begun with prudence in England, but rashly pursued in foreign countries; which, had the first trials on the human species been conducted with care and caution, might in time have produced most useful and surprising effects.

BUT after all, I am of opinion, that the greatest efforts of the human mind to extend a vigorous longevity much beyond fourscore, will generally prove ineffectual; and that neither the total alteration and discharge of old distempered humours, by a course of resolvent medicines, nor the substitution of fresh vital juices in their room, prescribed by the great lord Verulam and Boerhaave; nor the transfusion of young blood into old veins, tho' performed with the utmost precaution and dexterity, will ever avail to bestow strength and vigour on the bulk of mankind, for any great number of years, beyond the limits marked out by the Psalmist, and much less to produce rejuvenescency. Though I am persuaded, at the same time, that these methods prosecuted to accuracy, and reduced, if possible, to a general and easy practice, would make

by his physicians, and his bowels began to mortify; and had the same ill fate at Rome, being injudiciously tried on a person just worn out with a consumption. Vide Merklin. de ortu et occasu transfusionis.

the life of man hold out, free from the usual complaints of decrepitude, longer than it does at present, since we see every day, that an extraordinary strength of constitution, managed with common prudence, often exceeds an hundred years *.

LET us in the mean time make the best use of those advantages which we can easily compass. Let us, by a virtuous course of life, and by the practice of such rules as the experience of ages has established, endeavour to preserve health of body and soundness of mind, until we arrive at the boundaries which providence (unless we are our own enemies) seems to have nearly marked out for our respective constitutions. And then let us cheerfully submit to have the curtain drawn for a little while between our friends and us; and be ready and willing to enter into that happy state for which we were originally intended, and where we shall be secure from the approach of age and infirmities.

* See the diligent and good bishop of Bergen's natural history of Norway, where he relates from credible vouchers, that in the year 1733, four married couple danced in the presence of Christian VI. king of Denmark, whose ages joined together, amounted to more than eight hundred years, none of the four couple being under an hundred. Part 2. chap. 9. sect. 8.

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