

The catechism of health; or plain and simple rules for the preservation of health and the attainment of a long life. To which are added facts respecting the nature, treatment, and prevention of cholera / By A.B. Granville.

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THE
CATECHISM OF HEALTH;
OR,
PLAIN AND SIMPLE RULES
FOR
THE PRESERVATION OF HEALTH AND THE
ATTAINMENT OF A LONG LIFE.

TO WHICH ARE ADDED,
FACTS
RESPECTING THE NATURE, TREATMENT, AND PREVENTION OF
CHOLERA.

BY A. B. GRANVILLE,
M.D., F.R.S., F.L.S., F.A.S., F.G.S., M.R.I.,
&c. &c. &c.

LONDON:
COLBURN AND BENTLEY,
NEW BURLINGTON STREET.

1831.



C. Whiting, Beaufort House, Strand.



P R E F A C E.

THE idea of writing a Catechism of Health does not belong to the Author. It was suggested to him, a fortnight since, by a gentleman well acquainted with the passing humour of the times, no matter of what nature that humour may chance to be, political, or medical, fanciful, or speculative: and accustomed to feel the public pulse, and know its bearings and variations. In all communities there exist, at least, as many people who are regardful of their health, as there are who care nothing at all about it, and never think of it. But in the present emergency of a threatened epidemic visitation, all must feel equally anxious to save themselves and their kindred from the effects of a disease so frequently fatal, and at all times fearful. They therefore look to those individuals who, being

willing, can instruct them as to the best mode of preserving their health, by every means that can be placed within their reach. Hence have arisen the many able works with which we have of late been so abundantly supplied, concerning the expected disease, (a disease which has already shown itself in one of the maritime towns) and the precepts by which we hope to ward off its attacks. Hence also, the various schemes of instruction addressed to the less enlightened classes of the community, which have appeared, either in the daily journals, or in the form of cheap essays on the same subject. But there are circumstances about the nature and spirit of those publications, which defeat their object in a great measure, and leave unsatisfied still the want of a popular treatise on the best mode of preserving health at *all* times, and under *all* circumstances, together with any additional instructions which the peculiar mould and feature of the times, under the general impression of a forthcoming epidemic, may render necessary. These arguments prevailed on the Author, and he

forthwith undertook the task which he has this day brought to a conclusion. No person, perhaps, is better calculated to execute such a task with effect, than a Physician of twenty years experience, whose study it has always been to inquire into the habits and manners of all, but more particularly of the middle, the industrious, and the poorer classes of society, in every country in Europe; and who, from his official situation in more than one extensive medical institution in this metropolis, during a long term of years, has been thrown almost daily in the way of observing how the last mentioned classes, in particular, go through the world—what susceptibility of improvement they evince—and which are the wants and deficiencies, the omissions, as well as the commissions, that require advice, suggestions, and correction. As much of this good work, as the Author, with his limited abilities, could perform, he has endeavoured to effect; and in so doing, it will be an object of pride to him, if it shall hereafter be admitted, that as he has entered on this duty cheerfully, so

he has executed it with simplicity. For in addressing any class of society (yet more so those of inferior stations) on the subject of health, cleanliness, exercise, and diet, the language, as well as the sentiments, should be laconic without obscurity, useful without pedantry, natural without triviality.

The same individual who suggested the present work, placed into the hands of the Author, a small volume, of foreign importation, bearing the title of Catechism of Health, without any author's name, and apparently written with little care or attention either to facts, or to the language in which they were conveyed. The idea, however, was deemed a good one, and the arrangement unobjectionable, although requiring considerable alterations to render it uniform and intelligible. The skeleton of the little volume, therefore, was adopted as a ground to work upon, and a certain portion of its contents pressed into the service of the present Author, after having adapted it to the purpose and nature

for which his own publication is intended. The parts of the text, thus adopted, are, in fact, mere truisms which belong to mankind in general, in its associated state, and not to any particular author, and are therefore common property. Where these were conveyed in a clear and correct language, the Author has occasionally made use of them without any alteration.

It would have been impossible—nay unnatural, and almost criminal on the part of the Author, to have omitted, in a work like the present, the consideration of that all-engrossing subject, which, at this moment, involves the tranquillity of mind, and, at some future, and perhaps no distant period, will involve the lives of thousands of Englishmen. Accordingly, following always the plan of the Catechism, the Author has entered into a popular statement and explanation of whatever regards that most important question—throwing into this, the third part of his volume, the whole weight of his experience and

reflection, however insignificant in degree, especially with reference to that long disputed, but now happily settled point, of the real nature and character of Cholera, which has reference to sanatory laws and regulations. As stanch an advocate, as any physician who has seen the disease may be, for the doctrine of contagion in Plague, which the Author successfully supported in various writings, when brought in question some years ago in this country; the Author looked with almost personal jealousy on the attempt now made of forcing into an unnatural marriage with that doctrine, a disease which four-fifths of the people of Europe, and a large proportion of those of Asia and Africa have, through dear bought experience, and personal observation, learned to view only as the spontaneous offspring of celestial and terrestrial phenomena acting on the animal system in each geographical district, independently of each other, and without the necessity of inter-communication. That the Author did so view this attempt, must seem natural enough, seeing

that had the attempt really succeeded, though only for a time, the true and salutary doctrine of contagion, as applied to the Plague of the Levant, would, once more, have been exposed to the ridicule of the general unbelievers in any thing like contagion. The thanks of all those who coincide in these sentiments are due to many of the Author's brethren in the profession, for their effectual and repeated efforts to enlighten the public on this point; but to none more so than to Dr. James Johnson, a very talented physician, and to the anonymous Birmingham physician, who communicated his opinions through the *Lancet*.

One word more has the Author to offer by way of preface to his work. In adhering to the counsels of the best practitioners, who have recommended the use of counter-irritants and blisters in the treatment of cholera, the Author could not help noticing the regret with which those practitioners expressed their inability to produce either effect on the skin

with sufficient rapidity. This difficulty the Author has completely overcome, and he calls the attention of his readers to that part of the present volume, in which he proposes an embrocation which will produce a perfect blister in the brief space of a few minutes, or simple counter-irritation in less time. The composition of this embrocation, as well as of that of the “stimulating alkaline drops,” which have been found so useful in cases of indigestion and bowel complaints, and which have been recommended in another part of this work as a preventive of those disorders, and consequently of cholera, the Author is about to lay before his brethren, in a small tract, which is nearly ready for the press.

If, after the perusal of the present volume, in its unpretending garb of a catechism, wherein truths and facts are conveyed by means of questions and answers, in the most popular form—it should be said, that the leisure hours of a physician might have been better employed on a more dignified subject—the Au-

thor's reply will be, that no mode, however humble, of conveying instruction to the people on the subject of their health, without technicalities, can be considered as beneath the attention of any medical man, whatever may be his rank or degree in the profession.

16, Grafton Street, Berkeley Square,
18th November, 1831.

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UNDISPUTED LAWS WHICH GOVERN DISEASES IN GENERAL.

THE
CATECHISM OF HEALTH.

PART I.
PHYSICAL EDUCATION.

CHAPTER I.

HEALTH AND ITS BLESSINGS.

QUESTION. How long is man destined to live?

ANSWER. Were man to pursue a proper course of life, using with moderation every good gift of his Creator, he would live, did no accident occur, to an extreme old age, with the comfortable enjoyment of all his faculties.

Q. What must be the condition of the human body, in order that an individual may enjoy a long, prosperous, and happy life?

A. It must be in a state of continued health.

Q. What is meant by a state of health?

A. The body is in a state of health when

it is free from pains and infirmities, and performs all its offices with ease and regularity.

Q. By what signs could we judge that a child is likely to live long and in health ?

A. When its body appears flexible, straight, and robust ; being neither very fat, tumid, and spongy, nor parched and haggard, or strikingly lean ; when its limbs are well proportioned, and uniformly covered with flesh ; when the texture of the latter is firm, the colour of the surface rosy, the skin soft, and the complexion fresh and lively.

Q. Are great cheerfulness and activity in children marks of a healthy constitution ?

A. Those qualities are seldom to be met with except in children who enjoy perfect health.

Q. To ensure a healthy and long-lived offspring, what is necessary on the part of the darents ?

A. The father as well as the mother ought to be in the prime of life, healthy and vigorous ; neither deformed, nor subject to such diseases as are known to descend to the children, as consumption, scrofula, epilepsy, insanity, &c. They ought both to be the descendants

of long-lived parents, and to live a life of temperance and virtue.

Q. Do not the children of vicious and intemperate parents possess a healthy constitution?

A. Very seldom; such children generally bring into the world with them the seeds of disease, by which their lives are not only rendered short but miserable.

Q. Is it in the power of parents to promote the health and longevity of their offspring, as well as their happiness, by their conduct towards them during infancy and childhood?

A. Yes, and in a very great degree too, by a proper attention to their diet, exercise, and clothing, as well as by promoting the development of their moral and intellectual faculties during the early periods of life.

Q. What are the effects produced by a neglect of their children's health on the part of parents?

A. Children so neglected, in general, possess a weakly constitution, and an imperfect state of health, which follow them to the grave. They are subject to various infirmities and diseases, by which they are prevented from fully participating in all the pleasures of

life, and not unfrequently rendered incapable of performing those duties which devolve upon them, by the laws of God and of their country.

Q. What are the signs of a healthy condition of the body at the age of maturity?

A. The fresh and rosy colour of the face and of the skin generally; the quickness and perfection of the external senses; the firmness of the flesh, and strength of the bones. A large and full chest; the power of drawing a long breath without pain, coughing, or uneasiness; a good appetite, and a better digestion. Capability of going through considerable bodily exercise or labour without fatigue, and of sleeping quietly and soundly.

Q. What feelings does the individual experience who is in the enjoyment of perfect health?

A. He feels strong; full of vigour and power. He relishes his meals; is unaffected by either wind or weather; goes through his exercise and labour with ease; and appears ever cheerful and contented.

Q. What sensations belong to him who is deprived of health?

A. He is conscious of being feeble and in-

active; he has no appetite, or an irregular one. What he eats oppresses him; and causes pain or uneasiness. He can neither work nor amuse himself. He cannot, without danger, expose himself to the least degree of cold or dampness: his sleep is disturbed and unrefreshing, and his mind depressed and cheerless.

Q. Can children who are sickly be active and merry, and enjoy themselves at play?

A. No: sickness destroys their activity and gaiety, and renders them incapable of enjoying even the liveliest and most attractive sports.

Q. Is not, then, the possession of health a very great and important blessing?

A. Health is indeed one of the most precious gifts: it is equally necessary to enable us to perform the duties, as to enjoy the pleasures, of life.

Q. What says the son of Sirach in relation to health?

A. Better, he observes, to be poor and sound and strong of constitution, than rich and afflicted in body. Health and good estate of body are above all gold, and a strong body above infinite wealth. There is no trea-

sure like a sound body, and no joy like the joy of the heart.

Q. Cannot the sick and enfeebled, equally with those possessed of health, enjoy the blessings and rational pleasures of life ?

A. No: such pleasures and blessings have no charms whatever for those who are without health.

Q. If, then, health be the most precious boon of life, what duties has a man in this respect to discharge towards himself ?

A. It is his duty to observe such a course of living, as will tend to preserve his health, and prolong his existence, whereby he is sure to augment his own happiness, while he may minister to those of his fellow-creatures.

Q. Is it enough that he take care of his own health ?

A. No : he is equally bound to watch over and protect the health and lives of others, especially of his children and those over whom his authority extends.

Q. Is it in the power of man to ensure his own continued health ?

A. It is so to a very great degree. A very great many diseases and interruptions to health

are the effects of our own ignorance, folly, vice, or imprudence; these we have it entirely within our power to avoid, and hence, with proper precautions, we could ensure the largest share of an uninterrupted and perfect state of health.

Q. Should we not consider attention to the preservation of health as a moral obligation?

A. We should: man is called into this world in order to engage in certain active and necessary employments; and as the want of health renders him incapable to perform these, the care requisite to preserve the body from disease must of necessity be numbered among the duties of indispensable obligation.

Q. What are the principal causes which destroy health, and shorten our period of life, but which it is in the power of man, in general, to avoid?

A. They are intemperance in eating and drinking—unwholesome food, and the abuse of spirituous liquors—breathing a confined, impure, or otherwise unwholesome air—indolence, or a neglect of daily exercise—uncleanliness in our person, clothing, or dwelling—excessive fatigue, or too long-continued bo-

dily exertion—turning night into day—exposure to great cold and dampness, or to excessive heat, or to successive alternations of these—certain prejudicial occupations or trades—long-continued mental exertion; afflictions, sorrow, grief, misery, and debauchery.

Q. Are there not any other causes by which the health of an individual may be impaired, but which it is not in his power to avoid?

A. The constitution of an individual may be so reduced in strength, as to be laid open to the inroads of serious diseases from slight causes, in consequence of his being born of unhealthy or intemperate parents, as well as from having been neglected or improperly managed during his infancy and childhood.

Q. Are there no means by which a constitution suffering from the causes just referred to, may be rendered more robust?

A. Yes; we may hope to bring about such a desirable consummation by a regular and strictly temperate life; by daily exercise in the open air; and by the control of all inordinate passions.

Q. What is meant by a regular and temperate life?

A. A regular and temperate life consists in rising early every morning, and in retiring to bed at an early hour every night ; in taking a certain quantity of daily active exercise in the open air ; in preserving the body and clothing in a state of perfect cleanliness ; in abstaining as much as possible from distilled spirits of every kind, and in the moderate use of fermented liquors ; in eating food of the simplest sort, plainly cooked, and this only when, and in such quantities as, the appetite demands ; and finally, in keeping in subjection every passion and desire, the indulgence of which is incompatible with health, and therefore hurtful to society and displeasing to God.

Q. Can man enjoy a state of health if he pursue a vicious or immoral course of life ?

A. No : indulgence in vice or immorality is almost in every instance destructive to health.

Q. What condition in life is the most favourable to health ?

A. A middle condition—equally removed from wealth and poverty ; in which education and the benefits of occupation are enjoyed ; while luxurious refinement, as well as slavish toil, is excluded.

CHAPTER II.

INFANCY.

Q. To what period of life is the term Infancy applied ?

A. To the period between birth and the end of the third year, at which time the cutting of the first set of teeth is in general completed.

Q. What is to be understood by the expression early infancy ?

A. The first eight or ten months of existence ; or the period before the appearance of the four front teeth in both jaws.

Q. What is the proper food during early infancy ?

A. The milk of the mother, or that of a healthy nurse.

Q. Can an infant be reared upon no other food ?

A. It may, but with difficulty : when deprived of the breast it seldom thrives well ; is

very liable to affections of the bowels, and convulsions, and dies from a mere waste of the body.

Q. How long should an infant derive its food solely from the breast of its mother?

A. So long as no circumstance occurs to prevent the mother from affording to it in this manner a sufficient or healthy nourishment.

Q. At what age should the infant be taken from the breast?

A. As a general rule, not until it is one year old. A shorter or a longer period has its inconvenience.

Q. Are there no exceptions to this rule?

A. There are: thus, when an infant is peculiarly robust, and the teeth are early in making their appearance, it may be weaned somewhat before the shorter period; on the contrary, when it is puny and feeble, and the teeth are late in appearing, it should be kept at the breast for the longer period.

Q. Is it important to study the season of the year at which an infant should be weaned?

A. No: all seasons are equally proper.

Q. Should the infant be weaned at once?

A. Strong children that have been at the

breast a twelvemonth, are best weaned at once. Not so with sickly or feeble children; these should be accustomed by degrees to the use of other food before they are weaned.

Q. What is the most proper food for an infant after weaning?

A. Milk, and its preparations; well-baked wheat bread, eaten stale; panada, tapioca, arrow-root, boiled rice, light puddings, and similar kinds of food; a very moderate allowance of animal food, plainly cooked, is also admissible.

Q. What ought to be the drink of infant children?

A. Milk, or milk and water; pure water, whey, toast and water, and barley water.

Q. Can distilled spirits, or wine and other fermented liquors be ever allowed?

A. The first, never; the second, in cases of convalescence, or general debility, free from disease; and light malt liquor when additional nourishment is required. In general, strong drinks are injurious to the health of children: to allow them any at this early period, is to lead them to habits of intemperance in afterlife.

Q. What is in general to be observed with regard to the feeding of children ?

A. That they are regularly and moderately fed, and that their stomach is never overloaded with whatever food is employed ?

Q. Is it proper to give to infants cakes, sweetmeats, and similar kinds of food ?

A. Such articles of diet or luxury had, generally, better be avoided ; at the same time a plain cake, or an innocent sweetmeat, like currant-jelly, for instance, given occasionally, is not objectionable.

Q. To whom should the feeding of an infant be entirely left ?

A. It should be left entirely to the mother, or to an experienced nurse : no other person should be allowed to interfere, lest the health of the infant suffer from improper or too much food.

Q. What have you to observe with respect to fruit as an article of food for infants ?

A. Too much fruit, or that which is unripe or decayed, is unwholesome. But perfectly ripe and sound fruit, particularly if baked with sugar, may be eaten in moderation by children, without any injury.

Q. Do infants suffer much from exposure to cold?

A. Yes: hence every precaution ought to be taken, particularly by means of sufficient clothing, to protect them from a sudden or long exposure to cold. The practice of plunging infants daily in a cold bath, in spite of their never-failing screams; or of exposing them in cold weather with but little clothing, under the pretence of rendering them more hardy, is erroneous and injurious; so far from hardening them, it very generally impedes their growth, impairs their constitution, and sometimes hastens death; sponging their body with tepid vinegar and water, or salt and water, previously to their being dressed for the day, will best accomplish the object of giving strength to infants.

Q. Should infants and young children be kept very warm?

A. No. In winter they should be clothed in such a manner as to prevent them from being chilled; but too much clothing, and overheated apartments, are equally injurious with a contrary state of things.

Q. What is the best material for the clothes of infants during cool or cold weather ?

A. Soft fine flannel; an outer shirt and a petticoat of this material are in fact an indispensable part of the clothes of an infant during such weather.

Q. Should the clothes be frequently changed ?

A. They should, particularly the under-linen; if not kept perfectly clean, it will produce diseases of the skin, and other serious mischief.

Q. Is flannel a proper material for the clothes of infants during summer ?

A. During the extreme heat of summer it should be changed for soft thick calico or long cloth.

Q. What is the most proper covering for the feet of an infant ?

A. During early infancy the feet should have no other covering than a soft woollen sock, which ought to come higher than the ankle, in order that the circulation in the feet may not be disturbed; but when an infant begins to walk, a shoe of some soft and pliable material, with thin soles, may be worn.

Q. How are infants affected by the extreme heat of summer?

A. In cities, particularly in situations where the most perfect cleanliness is not observed, and free ventilation is prevented, the health of infants and young children suffers very considerably from the heat of summer.

Q. Is not an impure and confined atmosphere injurious to infants at all seasons of the year?

A. It is—in many parts of the world thousands of infants perish every year from this cause alone; crowded nurseries with many curtained beds in it, where lamps are burnt, and the cooking of tea and toast is frequently going on, are ill calculated to improve the health of infants.

Q. Should infants be confined entirely to the house, or should they be frequently carried abroad?

A. During summer and the milder seasons of the year, when the weather is favourable, infants ought to be frequently carried abroad. Not only is the open air at these seasons beneficial to their health, but the freshness, beauty, and variety of the scenes of nature

which the country presents when the children are sent thither, cannot fail to attract, and while they please, to produce a beneficial impression, upon even an infant.

Q. Is a warm covering necessary for an infant's head?

A. The reverse of that: a very light and loose cap, or straw hat, is all that is necessary, out of doors, until the head is covered with hair, when every covering is unnecessary, even in the coldest weather.

Q. What evil do you apprehend from keeping an infant's head very warm?

A. Such a practice is apt to produce a breaking out in the head or behind the ears; to cause the process of teething to be attended with an increased degree of suffering; to render the infant more liable to catch cold; and, finally, to impart to the brain a disposition to disease.

Q. Is it necessary that the bodies and clothing of infants be kept perfectly clean?

A. By a neglect of perfect cleanliness in either, their health always suffers, and their lives are not unfrequently destroyed.

Q. You then would have the bodies of children frequently washed?

A. Unquestionably; the entire body of the infant ought to be washed daily, by immersion, during cold weather, in a warm, and, during summer, in a tepid bath; while every cause that has a tendency to soil their bodies should be removed with the least possible delay; if necessary, twenty times daily.

Q. Is it proper to apply tight bandages or fastenings to the body and limbs of an infant?

A. On the contrary: all such bandages cause great uneasiness in infants, render it very difficult to preserve them perfectly dry and clean, and by impeding the growth of certain parts of the body, produce deformity and disease; I allude more especially to the belly and chest-bands, which nurses are apt to apply tightly, to give, as they imagine, to the infant, support and compactness; whereas, in good truth, they impede its respiration, and the expansion of the abdomen.

Q. Ought infants to be rocked to sleep?

A. Rocking an infant is entirely unnecessary, and when too frequently resorted to, or too violently performed, is certainly injurious.

Q. Do children rest and sleep well without being rocked?

A. Yes; provided they are kept constantly

dry and clean, in fresh air, loosely clothed, with their stomachs not loaded with too much or improper food, and their little limbs preserved sufficiently warm in winter and cool in summer.

Q. When an infant is awake how should it be treated ?

A. It should be put to the breast for a short time, and then the mother or nurse should play with it in an affectionate and kind manner, giving it frequent gentle exercise in the open air, when the season will permit.

Q. What important cautions are necessary in carrying a young infant in the arms, or holding it in the lap ?

A. Not to grasp it too firmly, lest its bones, which are soft and easily bent, become distorted; never to place it upon the arm so as to oblige it to support itself, without danger of its falling backwards, and to keep its head steady with the hand so as to prevent its rolling about, or being bent upon the shoulder; not to suffer the head to hang lower than the body when the child is held horizontally in the lap; and, above all things, never to toss it in the air.

Q. Should an infant be carried constantly on the same arm?

A. No; by its being in this manner confined too long to one position it will contract a habit of leaning to one side, or its body may become permanently crooked.

Q. Is much noise in general objectionable in the apartments of young infants?

A. Yes; silence and tranquillity are essential to the welfare of infants.

Q. When children are wakeful, peevish, and fretful, is it proper to administer anodynes or composing-draughts such as Dolby's carminative, in order to procure sleep?

A. By no means; they always cause an unnatural and, of course, unwholesome sleep; and if frequently repeated will destroy the health and life of the infant. Peevishness and wakefulness seldom exist without a cause, which opiates or anodynes cannot cure or remove. They will either arise from indigestion, inattention to their dress and cleanliness, or from disease.]

Q. Is it proper to scold or frighten an infant into sleep?

A. It is highly improper: frightening in-

fants is at all times liable to produce very serious injury.

Q. Ought a child to be suddenly awakened from sleep?

A. Certainly not; such a practice has been known to produce convulsions.

Q. As the eyes of infants are eagerly directed to every brilliant object, particularly to the light, what caution is to be observed in regard to this?

A. Infants ought to be placed or turned immediately in such a direction as to have the object by which they are attracted in a direct line before them, except it be a strong coal fire, from which their eyes should be averted. If we suffer the infant to look sideways at the object of its attention, we shall soon cause it to squint.

Q. By what means is the cutting of teeth in infants rendered difficult and dangerous?

A. By keeping the head too warm; by uncleanliness; by impure air; and by too much or improper food.

Q. What is to be observed with regard to making infants walk?

A. That all attempts to cause them to walk

too soon, or through artificial means, as by a string, or in chairs, or go-carts, or by leading them by the arm, are injurious, and apt to produce permanent deformity of the back or limbs.

Q. How ought parents, then, to manage in respect to the walking of an infant?

A. To suffer it to creep at will upon the floor or a carpet, until by degrees it learns of itself to use its feet in walking.

Q. How may infants be best assisted in learning to speak?

A. By pronouncing the names of sensible objects to them very distinctly and slowly; beginning first with those of the most easy articulation, and proceeding to those of greater difficulty.

Q. Are not the corrupt pronunciation and incorrect expressions generally made use of in speaking to children an impediment to their learning to speak?

A. Such a practice obliges them to learn the language anew at a later period, and not unfrequently teaches them habits of incorrect pronunciation, which they can afterwards overcome only with great difficulty.

Q. Can you enumerate some of the principal reasons why the majority of infants that are born die before they are two years old ?

A. Want of fresh pure air ; the effects of cold ; uncleanness ; improper food ; the abuse of anodynes, and of medicines generally. The intemperance, anxiety, and misery of parents are likewise to be ranked among the causes of the death of so many infants.

Q. I suppose that I am correct when I assume that the majority of infants die before the expiration of their second year ?

A. Truly so. Even in the first year of their age the fourth of the whole number of infants born in this country perish, according to Simpson. In France the number formerly was even greater. But both in these and other countries these numbers have since greatly diminished, owing to the improved physical treatment to which infants are subjected, and to the introduction of vaccination.

Q. In enumerating some of the principal reasons of the large number of deaths which take place in infants, you have entirely omitted to mention any disease. Do not these contri-

bute greatly towards increasing the mortality in question?

A. Unquestionably: and these, of course, I meant to include among the causes of death. Smallpox, measles, croup, scarlet fever, convulsions, diarrhœa, griping stools, thrush, and the painful process of dentition, unless properly attended to, add terribly to the mortality of infants.

Q. Is not one of the most essential points to be attended to in the taking care of infants, the selection of a good nurse?

A. Where the mother is compelled to relinquish in part the duty of taking care of her child, a good nurse is indeed most essential.

Q. What are the requisites to constitute a good nurse?

A. She must be healthy and cleanly, with good teeth, and a sweet breath. She must be good natured, careful, and active; willing to follow directions and not above being corrected. She should be gentle and patient; remarkable for honesty and candour, and ready to acknowledge her errors when she has committed any towards her charge. Above all, she should not meddle in physic; yet be watchful of her infant's health.

CHAPTER III.

CHILDHOOD.

Q. To what period of life is the term Childhood applied ?

A. To the period which intervenes between the second and fourteenth or fifteenth year.

Q. Is bodily exercise of great importance during childhood ?

A. Yes ; during the latter period of infancy and the whole of childhood a great part of the day should be spent in active amusements in the open air, whenever the weather will permit. Throughout the whole of the animal kingdom every young creature requires almost continual exercise, and in conformity to this intimation, infants and children should pass their best hours in those species of gambol which exercise the feet and hands without requiring very minute attention from the head, or the constant direction of a nurse.

Q. What good effects result from this practice ?

A. It promotes the growth, strength, and health of the body ; to a very great degree prevents deformity ; and prepares the child, generally, for the enjoyment of a long and vigorous life.

Q. What is the consequence of preventing children from partaking of sufficient playful exercise in the open air, and of confining them within doors in a sitting posture the greater part of the day ?

A. Children so treated become weak and sickly ; their bodies are stunted in their growth, and ill formed ; they remain enfeebled during life, and seldom reach old age.

Q. What are the kinds of exercise you recommend for children ?

A. Riding, swimming, shooting, fencing, archery, military exercise, billiards, shuttlecock, dancing. Walking, running, and leaping on the tight rope, which is of great use in preventing young people from being giddy and sick when they climb high places. Leaping and running, or trials of speed and longwind-

edness ; climbing ropes, wheeling wheelbarrows, digging, pulling, &c.

Q. Is the same freedom in regard to bodily exercise to be allowed to girls as to boys ?

A. In this respect no difference whatever should be made between them ; the bodies of both require exercise ; to deprive either of it must be productive of lasting injury. These observations, however, apply to the principle, and not to all the sorts of exercise enumerated, some of which are incompatible in young females.

Q. When children become tired from their exertion at play, is it proper for them to lay down on the damp ground or grass ?

A. No ; to do so would render them liable to colds, violent rheumatic pains, and swelling of their limbs, and occasion some incurable disease.

Q. What are the consequences of confining children for many hours in one posture, as upon a chair, bench, or stool ?

A. The restlessness and uneasiness always produced by such constraint, cause the body to be thrown into various awkward positions ; from which either permanent crookedness and

other deformities of the body are produced, or involuntary and ungraceful twitchings and twistings of the face, neck, or limbs, are acquired, which are seldom afterwards got rid of. By such a constraint, also, children gain tricks of involuntary actions, like the biting of nails, sucking of the thumb, and other strange gesticulations.

Q. What happens to children who are kept the whole day at work in a manufactory ?

A. Besides all the evils which result from want of exercise, the strength and health of their bodies are further impaired by the confined and impure air which they are forced to breathe in such situations.

Q. Is it prudent to load children with thick and heavy clothing ?

A. During warm weather their clothing should be light and loose ; and in winter it should be just sufficient to guard them from the feeling of cold, and no more.

Q. Do children who breathe a pure air, partake of sufficient and wholesome food, and take daily exercise in the open air, experience the effects of cold as sensibly as those under opposite circumstances ?

A. No; the stronger and more healthy the constitution is, the less it suffers from the effects of cold.

Q. Why ought the clothing of children to be loose, and as light as is consistent with their comfort?

A. In order that, by the removal of all constraint, the limbs may be enabled to obtain freely their utmost growth and their natural shape; while at the same time the body is guarded from the enfeebling effects of too great a degree of warmth.

Q. Then I am bound to understand that tight clothing prevents the growth of the body and causes deformity?

A. It has always that tendency.

Q. How ought the heads of children to be kept?

A. Perfectly clean and cool.

Q. How are these objects to be obtained?

A. By frequently washing the head with soap and water and pieces of flannel; by the daily use of a hard brush; by keeping the hair short, and avoiding caps of every species, and above all, heavy hats or bonnets, in girls as well as boys

Q. Does any injury result from allowing the hair of children to be too thick and long?

A. Yes ; for the head is with difficulty preserved perfectly clean ; and being moreover kept too warm, it becomes liable to pain, eruptions, scabs, and other unpleasant complaints ; the complexion of the child also is in general pale, and its eyes are weak or inflamed.

Q. Do you consider a cap necessary for children during the night ?

A. No ; I am convinced that the custom of wearing a nightcap is very apt to produce colds, and even more dangerous diseases.

Q. Is a thick or tight covering proper for the necks of children ?

A. Nothing, even moderately tight, should ever be worn round the neck ; it would be better, indeed, if this part were kept uncovered, excepting during very cold or inclement weather. This practice fortunately now prevails in England.

Q. What covering should be worn upon the feet of children ?

A. Loose and soft shoes, corresponding exactly to the shape of the foot, and without heels.

Q. What inconvenience results from heels to shoes?

A. In young children, more especially, they are apt to cause a bending of the back bone, while they prevent that free and easy motion of the body in walking and running, which children would exhibit were they to walk or run barefooted, or with flat shoes.

Q. What is particularly to be observed in regard to the stockings proper to be worn by children?

A. In summer no stockings should be worn, and only short socks. In winter, when soft woollen or cotton stockings become necessary, they should never be so long as to cover the knees, nor should they ever be tightly gartered. The elastic garters now in use are free from inconvenience.

Q. Is cleanliness necessary to the health of children?

A. The health of children like that of infants, cannot be preserved unless the skin and clothes are kept perfectly clean.

Q. Then the bodies of children, should be frequently washed?

A. The hands and face of children should

be washed previously to every meal; in summer their whole body should be immersed in a cool or tepid bath, and in winter, at least once a week, in a warm bath. Care must be taken that their skin is always kept perfectly dried.

Q. Do stays, belts, or braces form a proper part of the clothing of children?

A. They ought never to be worn, for they tend to deform the shape, instead of rendering it upright and graceful, as has been erroneously supposed; and they otherwise very seriously injure the health of the individual, as well during childhood as in afterlife.

Q. You therefore expect to derive great benefit from light and perfectly loose clothing in children; in fact, from the absence of all bodily restraint?

Q. Unquestionably. Their bodies will then become healthier, stronger, taller, and more beautiful, and the children will be able to acquire the best and most graceful attitudes.

Q. Ought children to eat much meat or animal food?

A. No; their diet should contain but a very small portion of wholesome meat plainly cooked, and that not every day.

Q. What, then, ought their food principally to consist of?

A. Of bread of a good quality, well baked, and eaten stale; of prepared barley, oatmeal, arrowroot, maccaroni, mashed potatoes, rice, milk, either fresh from the cow or variously prepared, plain rice or bread pudding, &c.

Q. Will they not become weak, and their bodies be prevented from acquiring their proper growth, if we restrict them in a great measure to a vegetable diet?

A. With a sufficient quantity of bodily exercise in a pure atmosphere, sound sleep, and a strict attention to the cleanliness of their bodies and clothing, children will become stronger and more robust, and attain to a much larger size upon that diet, than if it consisted principally of animal food.

Q. Should you approve of rich soups and gravies for children?

A. By no means: they overload the stomach, disturb digestion, and frequently produce sickness.

Q. Are such cakes as short cake, pound cake, twelfth cake, buns with a great many currants, and the like, proper for children?

A. Even in moderation they are injurious. I have often found a single currant lodged in the bowels to produce and keep up what is called infantile fever for some days. As children are almost always enticed to indulge in these things to excess, it would be better if they were entirely excluded from the nursery.

Q. Are they very difficult of digestion?

A. Truly so; and consequently disagree with the stomach, and cause uneasiness, pain, or sickness, which continue often for many days. This it is that renders the Christmas and New-year's seasons the most prolific in disorders of children.

Q. May children be allowed much butter?

A. Butter or fat of any kind is improper for children, generally speaking; but thin bread and butter with weak tea where milk disagrees, is allowable; bread and milk, however, is a much better diet, where it agrees with the constitution of the child.

Q. Ought children to be prohibited from eating when they crave food?

A. When a child is fed upon a very plain and simple diet, and is allowed plenty of exercise, it will seldom desire to eat except--

ing when it feels a natural appetite; under such circumstances to debar it from food would be highly improper.

Q. Are there no circumstances in which it would be wrong to give a child food as often as it craves it?

A. Yes; when a child is sick, when it has partaken of food a very short time before, or when it asks for articles of an improper kind, its cravings for food should not be indulged.

Q. What injury results to children from their eating too much?

A. They have constantly uneasy feelings; are plagued with pains in the stomach and head; become pale, bloated, or covered with blotches and eruptions; feel very little inclination to play about, and amuse themselves; and are very often sick.

Q. I presume you would not permit the food of children to be seasoned with spices?

A. Certainly not: besides rendering the food of too heating a quality, spices of every sort, or much seasoning of any kind, create an artificial appetite, and induce the child to eat more food than its little stomach can dispose of.

Q. What is the best drink for children ?

A. The same as I mentioned when speaking of infants.

Q. Children ought not then to be allowed ardent spirits or fermented liquors ?

A. It would be well if every parent would consider it a crime to give to a child, or allow it to make use of, either.

Q. Is fruit proper for children ?

A. Fruit which is in season, and perfectly ripe, and sound, and slightly acid, may be eaten by children in the middle of the day, but in very moderate quantities at a time, and with bread.

Q. Is fruit in its raw state, or when cooked, best for children ?

A. In general baked fruit with sugar is the most wholesome for children.

Q. What consequences are to be apprehended from unripe, very sour, or decayed fruit ?

A. Sickness, violent pains of the stomach, vomiting, and other distressing symptoms.

Q. In eating stone fruit, as cherries and plums, ought children to be careful not to swallow the stones ?

A. A caution to that effect is of great importance to children. The swallowing of the stones of fruit has been known to occasion the most dreadful maladies, and at times, even fatal accidents.

Q. Do you object giving to children sugar-plums, coloured candies, and similar confectionary ?

A. Certainly, because the colouring matter is not unfrequently of a poisonous quality. It consists of a chemical preparation, which in very minute quantities, may be harmless, but which is most pernicious and fatal to the strongest of children, when by their eating repeatedly of such articles its quantity is much increased. In some instances death has been caused in this manner.

Q. Should children, when heated at play, be permitted to partake of food or drink immediately after ?

A. No ; they should rest until such time as their bodies have become cool, before they are allowed to eat or drink.

Q. How soon in the evening ought a child to retire to bed ?

A. Immediately after darkness sets in, du-

ring summer, and at eight o'clock in the winter.

Q. Should it leave its bed early in the morning?

A. Yes; shortly after daylight in summer, and soon after sunrise in winter.

Q. What harm results from lying in bed late of a morning?

A. The child becomes indolent and enfeebled, sickly, and more liable to catch the diseases natural to its age.

Q. Would you allow several children to sleep in the same room?

A. Unless the sleeping apartment be very large, not more than one, or at most two children should be permitted to occupy it at one time.

Q. Even in a large apartment, should you crowd several children in one bed?

A. No. From the time that children are sufficiently old to sleep away from their mother or nurse, it is better on many accounts that they should occupy separate beds.

THE FOLLOWING TABLE

Will exhibit at one View the Number of Hours which Children from the Age of Seven Years, should be made to pass in Study, Exercise, and Sleep, as well as in taking proper Nourishment.

Age.	Hours of Sleep.	Waking Hours.	In Study.	Meals, Rest &c.	Corporeal Exercise.
7	10	14	1	4	9
8	9	15	2	4	9
9	9	15	3	4	8
10	8	16	4	4	8
11	8	16	5	4	7
12	8	16	6	4	6
13	8	16	7	4	5
14	7	17	8	4	5
15	7	17	9	4	4

The latter may be thus employed:

Q. What ought to be the situation and condition of a school-room ?

A. It ought to be built in a dry, open, and elevated situation ; to be well lighted, spacious, with lofty ceilings, and well ventilated. It is also important that it should be perfectly dry and clean, and capable of being kept sufficiently cool in summer and warm in winter.

Q. Are school-rooms, the floors of which are below the common level of the ground, proper ?

A. No ; they are very improper ; they can never be kept sufficiently dry and freely ventilated.

Q. What effect have small, low, damp, dirty, and ill ventilated school-rooms upon the children who occupy them ?

A. Such apartments cannot be occupied even for a short time without injury to health ; and when many hours of the day are spent within them, the countenance of the children becomes pale, their strength is impaired, and either rheumatism, scrofula, consumption, sore eyes, or other serious disease is likely to be produced.

Q. What is your opinion as to the number

of hours during which children may be kept sitting in school?

A. A very short period should be occupied at any one time in the school-room during pleasant weather, seldom more than two hours; and while there, the children should be allowed, at short intervals, to stand upright and walk about.

Q. How can we lay a foundation during childhood for habits of activity and industry?

A. By allowing the child unrestrained exercise with those of his own age; by teaching him the very close connexion which subsists between health and bodily activity; by encouraging him to engage for a short time every day, during proper weather, in such species of active occupation in the open air as is proportioned to the strength of his body; and by accustoming him to do every thing with due reflection and at proper periods,—never postponing until to-morrow that which should be done to-day. ✎

CHAPTER IV.

AIR.

Q. By what other name is the air which surrounds, designated ?

A. By that of atmosphere.

Q. Do you know of what it is composed ?

A. Of a combination of certain fixed or unchangeable proportions of two invisible substances, one of which is by itself destructive to animal life, while the other is absolutely necessary to its support.

Q. Are there no other ingredients mixed with the atmosphere ?

A. Yes ; it contains also, invariably, a small quantity of the same air which is given out during the fermentation of wine or beer, and which, in the case of the atmosphere, comes from the breath of animals, the burning of vegetables, &c. Also a certain quantity of vapour, and often foreign substances produced during the various processes of life, and other operations of nature.

Q. Are the two invisible and gas-like sub-

stances of which the atmosphere is composed invariably the same, and in the same proportions in all places and at all times ?

A. Just so, both at sea and on land, in high as in low situations, at night as well as in the morning—in hot equally as in cold weather.

Q. How comes it then that we talk of the different effects produced on our body by the air of certain climates, or of certain places, or of certain seasons ?

A. This difference is not imaginary—but is due to the natural properties of the air as a compound, and not to its chemical composition, which never differs. It depends, in fact, on the watery vapour mixed with the atmosphere, on the heat which expands it and renders it thinner and lighter, on light and electricity, and lastly, on the presence of other matter kept in suspense in the atmosphere.

Q. What state of atmosphere is best adapted for the support of life ?

A. When it is pure, containing few foreign substances, neither too dry nor too moist, too warm nor too cold, and in a constant state of circulation.

Q. What effects has pure and cool air upon the human frame ?

A. It refreshes the body, rendering it vigorous and healthy, while it imparts composure and serenity to the mind, excites the appetite, renders the digestion of food more perfect, and induces sound and balmy sleep.

Q. What are the effects of living in foul, damp, and stagnant air ?

A. The system becomes weak and unhealthy, and the mind depressed and gloomy; while fevers and other diseases of the most malignant character are apt to be generated.

Q. By what means is the atmosphere rendered impure and prejudicial to health and life?

A. By every thing that prevents its free circulation; by a number of persons being crowded together in a small space; by the burning of gas; by large masses of vegetable and animal substances in a state of putrefaction; and by certain manufactories and processes in divers arts and trades.

Q. Is the air of a city or that of the open country most friendly to health ?

A. Generally speaking, that of the open country.

Q. What are the circumstances which may render the air of the open country prejudicial to health ?

A. If the situation be low and damp, or in the neighbourhood of a large marsh, or collection of stagnant water, or if the house be near to a smelting-furnace, or a brick-field, &c. the air will be more or less prejudicial to health.

Q. What are the causes which render the air of cities less pure than that of the country?

A. The breath and perspiration of the inhabitants in health and disease; the filth which is unavoidably accumulated, even with the strictest attention to cleanliness; the impediments to a free ventilation occasioned by a number of buildings, the reflected heat and light from white walls, and the numerous fires which are made use of at all seasons of the year; the large burying-grounds, extensive manufactories, &c.

Q. What is the most healthy situation in a city?

A. A residence in a wide and straight street, open at both ends, north and south, well paved, and kept perfectly clean, distant from large manufactories of every kind, from burying-grounds and churches, from ponds of stagnant water, and having in the rear an

open space of some extent either well paved, covered with grass, or cultivated as a garden.

Q. What is the most healthy habitation in a city?

A. One so planned as to admit throughout of a free ventilation; having large, light, and lofty apartments, and perfectly free from damp.

Q. What circumstances may render the air of a house or room impure?

A. The frequent exclusion of external air or the neglect of free ventilation; inattention to perfect cleanliness; the exhalations from damp and foul clothing or furniture; the breath and perspiration of a number of persons; the smoke from lamps, candles, gas, &c.; the putrefying process of vegetable or animal substances accumulated in the yard or area; the steam from ironing linen, cabbage water, and the exhalation from burning charcoal, &c. all tend, in a greater or less degree, to corrupt the air of a room or dwelling, and to render it unwholesome or totally unfit for the support of life.

Q. What ought to be done by those who are obliged to spend much time in the house?

A. Besides seeing that the room they occupy is kept strictly clean, they should occasionally open the door and windows, (if the weather will not permit these to be kept constantly open,) in order to change the air which has been rendered impure, by means of a fresh supply from without.

Q. Is it proper to keep perfumes or flowers of strong fragrance in a closed room occupied by living beings?

A. No; it is highly injurious, especially in a bed-room; they corrupt the air, and cause headach, giddiness, and sometimes apoplexy.

Q. Is the air most impure during the day or night?

A. There are many causes which tend to render the air at night less pure than during the day.

Q. Is it proper to occupy a very warm room?

A. At all seasons of the year it is injurious to live in a higher temperature than sixty-two or sixty-three degrees.

Q. What injury results from living in a higher temperature?

A. The body is relaxed, the complexion

spoiled, digestion retarded, and the system rendered peculiarly liable to the influence of cold ; a slight exposure often producing serious disease.

Q. Is it proper to remain in a damp room, or in one very recently scrubbed, whitewashed, or painted ?

A. No : by so doing a severe cold, pleurisy, rheumatism, headach, and indigestion may be contracted.

Q. Is it proper to sit opposite to an open door or window, or between both ; in other words, in a draft or current of air ?

A. This is particularly injurious after sunset, during sleep, or when we are in a perspiration, or fatigued by previous labour or exercise.

Q. Is any care necessary in visiting a cellar, vault, or other subterranean place ?

A. As the air in such places is always more or less impure, if they are so situated as to prevent ventilation almost entirely, their atmosphere may be such as immediately to destroy life.

Q. By what means may we distinguish the impurity of the air in these places ?

A. By ascertaining its effects upon a lighted

candle; if this be immediately or speedily extinguished by it, or if it burn in it but dimly, the air is impure, and would be prejudicial to life.

Q. Is the passing at once, during winter, from a heated apartment into the external cold air likely to produce mischief?

A. It is attended with very little danger, provided the body be not in a state of perspiration, and we take care to be protected by an additional quantity of clothing, and preserve the warmth of our body by brisk movement.

Q. Is the sudden passage from a cold to a heated atmosphere liable to produce any inconvenience?

A. If the difference between the two atmospheres be considerable, very serious injury to health is liable to be produced. Colds in the head are more generally caused by this than by the former transition.

Q. How can this injury be prevented during the winter season?

A. By never allowing our rooms to be warmer than what actual comfort may demand; or by remaining a short period in a cool apartment previously to entering one of a higher temperature.

Q. How may the injurious effects which you state the impure air of cities to produce on health be counteracted by those who are obliged to reside therein?

A. By temperance, personal and domestic cleanliness, and by daily walks of an hour or two in the most healthy parts of the surrounding country.

Q. Is the frequenting of crowded assemblies prejudicial to health?

A. Yes; particularly when collected in a close room in summer, or, in winter, where a fire is blazing and numerous lights are burning.

Q. In what manner can crowded assemblies become injurious to health?

A. By the extreme degree of heat they create on the one hand, in consequence of which the circulation of the blood is hurried and much of it directed to the head; and on the other hand, by the vitiation of the air caused by the breath and exhalations of so many individuals collected in a small space.

CHAPTER V.

EXERCISE.

Q. Is it necessary that man should take exercise ?

A. Without the regular active exercise of the body, its health cannot be maintained.

Q. What is meant by active exercise ?

A. It is that species of bodily movement which is produced by the natural actions of the limbs, whether general or partial, such as walking, jumping, gesticulating, running, &c.

Q. What is to be understood by passive exercise ?

A. That motion by which the body is conveyed from one place to another, by artificial means, such as the going in a ship or carriage.

Q. Which is most conducive to health ?

A. It is by active exercise, almost alone, that the system can be preserved in a state of health.

Q. Is it sufficient to take exercise occasionally and at long intervals ?

A. By no means ;—in order to be beneficial to the body exercise should be taken daily, and should last for a certain number of hours.

Q. In what way does the system suffer from want of exercise ?

A. The body becomes weak, the appetite is impaired, the digestion is imperfectly and painfully performed, the limbs become emaciated, tremulous, and disinclined to motion, the countenance turns pale and languid, the spirits are depressed and gloomy, and the duration of life is considerably shortened.

Q. What, on the other hand, are the more prominent effects which result from regular bodily exercise ?

A. A healthy appetite, an invigoration of the powers of digestion, and of the system generally, sound and refreshing sleep, a freshness of the complexion, cheerfulness of the spirits, a power of warding off disease, and of preserving the vigour of both mind and body to an advanced age.

Q. Independently of the benefits resulting from regular active exercise already pointed out, is there not still another advantage to be derived from taking it in cold weather ?

A. Yes; regular brisk exercise during the winter season preserves the warmth of the body, and renders it less susceptible to the influence of cold, as well as less dependent for its comfort on artificial heat.

Q. Is the supposition that females require less exercise than men correct?

A. By no means; both sexes stand equally in need of regular active exercise.

Q. What period of the day is best adapted to exercise?

A. Early in the morning, and towards the close of the day. In very cold winters, noon-time is the best.

Q. Is it proper to carry exercise to such a degree as to produce a feeling of lassitude or fatigue?

A. No; a slight degree of weariness is desirable, but all beyond this is injurious; for both local and general bad effects have arisen from excess in this matter; such as inflammation, lumbago, extenuation of nervous power, constipation and a wasting of the body.

Q. Should active exercise be entered upon immediately after eating?

A. No; some hours should always be allowed to elapse after each meal before exercise is taken.

Q. What are the principal objections to bodily exercise immediately after a meal?

A. Not only is the body less inclined to exertion at this period, but the process of digestion will be impeded and rendered imperfect through it.

Q. What is the most beneficial kind of exercise?

A. Walking is at once the most beneficial and most natural exercise.

Q. Why is the exercise of walking so beneficial to health?

A. Because in the erect posture every part of the body is without restraint; while by the gentle motion which is communicated to each portion of it in the act of walking, the free circulation of the fluids through every part is promoted.

Q. In what kind of dress should exercise be taken?

A. In one which leaves every limb and joint at perfect liberty; which allows the breast to dilate to its fullest extent; in short, a dress in which the body experiences not the least compression or restraint.

Q. When the body becomes heated by exercise, is it proper to throw off any part of our dress, and sit on the damp ground, or in a draft of air, or on the grass, or on a cold stone?

A. No; this would be in the highest degree imprudent. In general active exercise during mild weather should be taken in a light dress, which would admit of an additional clothing being assumed immediately on ceasing from it. In winter it is best to retire immediately into a dry and comfortable apartment.

Q. To what class of persons is walking during several hours of the day absolutely necessary for the preservation of their health?

A. To the sedentary; that is to say, to those who sit for the greater part of the day at some employment which requires but little bodily exertion, such as tailors, shoemakers, clerks, students, &c.

Q. In what position should the body be held in walking?

A. It should be kept as upright as possible, the shoulders being held back, and the breast projected somewhat forwards.

Q. What advantage results from this position?

A. The chest being allowed by it to dilate fully, the act of breathing is performed with perfect ease and freedom, and the blood circulates freely through the lungs, in consequence of which an increase of vigour is communicated to all the actions of the system.

Q. Ought exercise to be taken in the open air?

A. Decidedly; for then we have the beneficial influence of another agent. Exercise within doors is attended with much less beneficial effects than that which is taken in the open air. To the citizen, moderate daily walks into the surrounding country are highly conducive to health.

Q. Are not the bodies of mechanics sufficiently exercised by their employments?

A. There are few mechanical employments which can supersede the necessity of regular bodily exercise in the open air. The exercise of mechanics is in reality labour or fatigue.

Q. From what does this necessity of regular exercise in mechanics arise, seeing that many of their occupations demand great exertion of the limbs?

A. It arises from this circumstance, that their exertion is partial, some of the limbs being constantly exercised, while others remain very nearly inactive. Most mechanical employments, also, require a bent or constrained position of the body, and are carried on within doors or in an impure atmosphere, the bad effects of which can only be obviated by bodily exercise, especially walking, in the open air.

Q. What is the effect when a portion of the body only is constantly exercised ?

A. The advantages derivable from general exercise are in a great measure lost, while the part exercised acquires a bulk disproportionate to that of the rest of the body.

Q. Ought the mind to be occupied at the same time that the body is in exercise ?

A. All those species of exercise in which the mind can at the same time be agreeably occupied and amused are far more beneficial than such as are performed merely as a task.

Q. Are running and leaping healthful exercises ?

A. They are both considered as species of violent exercise, and adapted only to those

in perfect health, to the young and robust, and more fit for the colder seasons of the year. They are, however, less beneficial than walking.

Q. What kind of exercise, next to walking, is most to be preferred?

A. Riding on horseback. A ride of eight or ten miles a day will be found highly advantageous to all who are debilitated by confinement within doors, and by long-continued sedentary habits.

Q. Enumerate some of the other species of exercise which may be considered as contributing to the support of health?

A. Various active amusements carried on in the open air, such as gardening, and certain agricultural occupations, as well as botanical excursions.

Q. Is riding in a carriage a beneficial exercise?

A. Only to a limited extent, and when the carriage is an open one. This is passive exercise.

Q. What renders it of so little benefit?

A. Because the motion communicated by it to the body is trifling and only partial; the

lower limbs in particular, from the sitting posture which such exercise requires, being in a state of almost complete rest.

Q. Why ought a closed carriage to be avoided?

A. Because the air confined within so small a space as the interior of a carriage very soon becomes vitiated, particularly when it is breathed by several persons together; while a considerable risk of catching cold is experienced if the glasses be kept down.

Q. What effect has the exercise of dancing upon health?

A. A very beneficial one, particularly to young females, provided the exercise be not too violently performed, nor carried to the extent of producing considerable fatigue; under the latter circumstances it becomes injurious.

Q. What other circumstances tend to render this exercise injurious to health?

A. When it is performed late at night in crowded and overheated apartments, and in a dress which compresses tightly any portion of the body:

Q. You said that swimming is a healthful exercise; is it so?

A. It is; it combines the advantages of bodily activity with those of the cold bath.

Q. Is it equally adapted to every individual?

A. No; it is proper only for those of strong and vigorous constitutions.

Q. During what sort of weather is swimming an improper exercise?

A. It should not be resorted to during cold, chilly, or damp weather. Never from October to May.

Q. What should be the condition of the body previously to entering the water?

A. It should be entirely free from any degree of chilliness or exhaustion, and not in a state of profuse perspiration.

Q. What is proper to be done previously to entering the water?

A. It is always a very judicious practice to partake of a degree of exercise sufficient to excite a glow of heat over the whole body.

Q. Is there no other precaution which your experience would suggest?

A. Yes. We should never walk into the water with our naked feet before we have thoroughly wetted our head by pouring some buckets of cold water over it; neither should

we plunge head foremost into the stream or sea, lest we should by either practice force blood into the head, a circumstance calculated to produce the most fatal consequences, as I have had frequent occasion to witness.

Q. Which period of the day is best adapted for swimming?

A. The morning, after sunrise; or an hour or two before sunset.

Q. What is the most fitting place for swimming?

A. The sea; or a clear running stream of sufficient depth, having a sandy or gravelly shore and bottom.

Q. Is it proper to swim in an open river during the middle of the day when the heat is considerable?

A. No; it would be dangerous to do so.

Q. What are the places in which swimming should not be practised?

A. Stagnant and thickly-shaded pools, particularly in the neighbourhood of marshes.

Q. What should be done immediately after coming out of the water?

A. The body should be quickly wiped dry by friction with a coarse towel.

Q. Should an individual immediately after bathing remain inactive?

A. No; he ought always to take a gentle degree of exercise, until the skin begins to glow.

Q. You have said little or nothing of boxing, fencing, and hunting. Are not these kinds of exercise particularly conducive to health?

A. They are so; and with robust persons, and others too much inclined to get fat, they may be found extremely useful; but, in general, I view them as violent exercises, which are never good for any thing until they have tired us excessively—for it is only when we have indulged in them long that we enjoy them—and then the mischief to the muscles and limbs is already effected. People who practise such exercises are known generally to keep in perfect health; but sooner or later they have occasion to regret having indulged too much in them.

CHAPTER VI.

SLEEP.

Q. Is a certain quantity of sleep essential to the health of man ?

A. Yes ; deprived of the necessary repose, the mind equally with the body suffers.

Q. What number of hours of sleep do you consider necessary ?

A. This will differ in almost every individual, according to his age, strength, degree of health, and the quantity and nature of the exercise taken during the day.

Q. Do children require a greater quantity of sleep than adults ?

A. As a general rule they do ; particularly very young children, as I showed you in my table of the distribution of time.

Q. Persons who take a great deal of exercise demand, I suppose, more sleep than those who take but little ?

A. Yes ; when either the mind or body is kept in active exercise during the day, the

quantity of necessary rest is always greater than under opposite circumstances.

Q. What is the proper time for sleeping?

A. Experience proves that nature has designed the night for the period of repose.

Q. Is sleeping during the day, then, to be avoided?

A. Whenever sufficient sleep can be obtained at night, sleeping at any period of the day should be avoided, at least by adults in a state of health.

Q. Does any injury to health result from passing many hours of the night in labour, study, or the pursuit of pleasure?

A. Yes; the practice is always attended with a destruction of health to a greater or less degree. To retire to rest at an early hour should be a rule strictly adhered to by all.

Q. Do you recommend people to rise early in the morning?

A. Such a practice is one of the best means of preserving health.

Q. Is it proper to retire to bed soon after eating a full meal of solid food, supper for example?

A. No; for in such a case our sleep will be

heavy, disturbed by dreams, and unrefreshing, in consequence of which our health will greatly suffer.

Q. What kind of sleep is enjoyed by those in health?

A. A profound, but not heavy—a quiet, and refreshing sleep, undisturbed by dreams.

Q. What circumstances, in addition to health, are requisite to ensure a quiet and refreshing sleep?

A. It is necessary that the body should feel a degree of weariness from exercise in the open air; that the stomach should neither be overloaded with food nor experience hunger; and that the mind enjoy contentment and peace.

Q. Is soundness of sleep a matter of importance?

A. It is only after a night of sound repose that an individual awakes with a renewed desire and capacity for labour, and in an invigorated and cheerful state of mind.

Q. Ought we to sleep in a cool, pure, and dry air?

A. Yes; it is therefore important not to sleep in rooms underground, in sitting-rooms,

nor in chambers crowded with beds, but in cool, dry, large, and lofty apartments that are capable of being freely ventilated during the day.

Q. Is it proper in warm weather to allow the windows of a bed-room to remain open at night?

A. No; more especially it is injurious if the bed is placed in the draft of air admitted by an open window during the night.

Q. Is a bed closely surrounded by curtains prejudicial to health?

A. Yes; because in such beds nearly all the advantages of a spacious apartment are counteracted, and the individual during sleep is obliged to breathe in a small and confined atmosphere.

Q. Is it proper to cover the face with bed-clothes during sleep?

A. Such a practice is full of danger.

Q. Then to suspend a curtain over the front of a cradle during the sleep of an infant cannot be proper?

A. It is in the highest degree improper.

Q. What say you to the keeping of a fire burning in a bed-chamber?

A. In a state of health it is always improper, excepting when a person is obliged to sleep in a very damp apartment, or during very cold weather, even should the fire be extinguished some time before he retires to bed.

Q. Is perfect cleanliness all important in a bed-chamber?

A. A dirty bed-chamber is, if possible, even more injurious to health than a dirty parlour or sitting-room.

Q. Is it unwholesome to sleep in feather or down beds?

A. It is unwholesome, particularly in summer.

Q. What renders such beds unwholesome?

A. By the great degree of heat which they communicate to the body, beds of feathers or down tend to debilitate it; while they also render the system more liable to suffer from the effects of cold.

Q. Which are the most wholesome beds?

A. Mattresses stuffed with horsehair, wool, straw, moss, or the like.

Q. Are these beds proper for children?

A. The health, strength and vigour of

children are far better preserved by causing them to sleep upon such beds than upon one made of feathers.

Q. Is it requisite to keep the body very warm in bed by means of numerous blankets and other coverings ?

A. No ; it is sufficient to preserve the body while asleep comfortably warm ; for which purpose a couple of blankets without any of the heavy coverlets are all that is necessary. Every additional covering is injurious to health.

Q. What cautions are necessary in regard to the bed and bedclothes ?

A. That they be perfectly clean, free from damp, and well aired during the day.

Q. Before going to bed what should be observed with respect to our night-clothing ?

A. That it be perfectly loose ; all ligatures or bandages being removed, particularly from about the neck and chest, knees and wrists.

Q. Are feather pillows injurious to health ?

A. By keeping the head too warm they are apt to occasion colds, headaches, inflammation of the ears, &c.

Q. Is a cap or covering for the head proper during sleep ?

A. In winter a light loose cap is necessary in cold climates, but not in summer, excepting in the case of females who wear a cap during the day. By whatever contrivance the heat of the head is increased we are sure of doing mischief.

Q. Do you think that the poor who are obliged to sleep with the bed upon the floor, derive harm from it?

A. Yes; for the air immediately above the floor is in every room the most impure.

Q. Is it proper to sleep upon the grass or ground?

A. This is highly injurious, even to the most robust constitution, in every season of the year, whether in the daytime or at night.

Q. What injury results from it?

A. The dampness of the ground or grass will give rise to rheumatism, pleurisy, or other equally serious disease.

Q. Cannot a person sleep too much, and in that manner injure his health?

A. Yes; too long a period spent in sleep enervates the system, destroys digestion, depresses the spirits, renders an individual nervous, and disinclined to any exertion of body or mind.

CHAPTER VII.

FOOD.

Q. When ought man to partake of food ?

A. Whenever he feels a natural desire or appetite for it.

Q. What is meant by a natural appetite ?

A. That inclination for food which occurs in a healthy individual from time to time.

Q. Of what kind of food ought man to partake ?

A. Of plain and wholesome food, plainly cooked.

Q. Ought it to consist of vegetables or of the flesh of animals ?

A. Of a proper mixture of both.

Q. How much ought an individual to eat ?

A. Only so much as to satisfy his natural appetite.

Q. Can an individual enjoy perfect health on animal food alone ?

A. He will enjoy less perfect health than if he lived on a proper intermixture of animal and

vegetable food; or even on one composed entirely of the latter.

Q. Most people eat with haste; is that correct?

A. No; every portion of the food should be fully masticated before it is swallowed.

Q. If our food be not properly masticated what is the consequence?

A. It cannot be fully digested by the stomach; hence it overloads the latter, does not yield sufficient or proper nourishment to the body, destroys the natural appetite, produces uncomfortable feelings and uneasiness after dinner, and lastly disease follows.

Q. In what manner is an unnatural and inordinate appetite for food produced?

A. By partaking of a great variety of food, or of that which is richly cooked; by rich sauces, high seasoning, and by the use of wine and stimulating drinks at meals, or tonic medicines.

Q. Is not a man's health and strength always in proportion to the amount he eats?

A. Not after the age of twenty years. A very moderate quantity of plain food is all that is necessary after that age for the support of health and strength; all beyond that may injure both.

Q. What ill effects arise from over eating?

A. The powers of the stomach are impaired; the body becomes puffed, languid, and enfeebled; the spirits are depressed, and the mind is rendered inactive; finally, the constitution is attacked by gout, dropsy, apoplexy, and other serious complaints, and the duration of life is considerably shortened.

Q. What is necessary in order that wholesome food, eaten in moderation, may communicate a sufficient quantity of nourishment to the system?

A. It is essential that the powers of the stomach be sufficient to the perfect digestion of that food.

Q. What are the causes by which the powers of the stomach are impaired?

A. Intemperance in eating, either as to quantity or quality, drinking distilled spirits, or immoderate quantities of wine and malt liquors, neglect of exercise, over fatigue, want of regular sleep, impure air, intense application of the mind, anxiety, the too frequent use of purgative medicines, &c.

Q. How are the healthy powers of the stomach best preserved?

A. By drinking only water, by regular active exercise in the open air; by partaking

of wholesome and simple food, plainly cooked; by eating only when we feel appetite for it, and leaving off the moment the appetite is satisfied; by personal cleanliness; breathing a pure atmosphere, and by preserving the mind as free as possible from anxiety and care.

Q. In what manner do the refinements of cookery, rich sauces and spices, become injurious?

A. They disorder the stomach, and, consequently, the health of the system generally, for they render the food too heating, and difficult of digestion, and by inducing us to partake of too much food, or to eat in the absence of the natural appetite, cause a surfeit, and an overloading of the bowels.

Q. Is it proper to partake of food while the body is labouring under the immediate effects of considerable fatigue?

A. Whatever food is then eaten should at least be very light, in a fluid form, and taken in moderation.

Q. How many meals should an individual take in the course of the day?

A. On this subject no rule can be laid down; the wants of the system, as indicated

by a healthy appetite, should be the only guide as to the frequency and extent of our meals.

Q. In a healthy condition of the system, at what period will food be most generally required?

A. Soon after waking in the morning, and also towards the middle of the day. Breakfast and an early dinner would appear, therefore, the most indispensable meals to an individual in health, who uses daily active exercise.

Q. Should we ever allow the stomach to endure for any length of time the sensation of hunger?

A. No; by so doing its powers are weakened.

Q. Who requires the most food, the individual who devotes the greater part of the day to bodily exercise, or he who spends it in sedentary employments within doors?

A. The first will require the most food: for his appetite will be greater, and the powers of digestion stronger.

Q. Do you make any difference in the quantity of food allowed during winter and summer?

A. Yes; in winter the larger quantity is called for. In summer the food should consist principally of vegetables, of preparations of milk and the like.

Q. Is a large quantity of liquid drunk at meals likely to impede digestion, as stated by some authorities?

A. Unquestionably in the majority of stomachs: yet this is a rule with many exceptions.

Q. What constitutes the most important article of diet in all civilized countries?

A. Bread, which has been justly styled the staff of life.

Q. What are the requisites to constitute bread a wholesome food?

A. That it be made of good wheaten flour, that the dough be rendered sufficiently light by leaven before it is put into the oven, that it be well baked, and at least one day old before it is used.

Q. Is not warm or perfectly new bread wholesome?

A. No; it is difficult of digestion, and always disorders the stomach, by producing wind and heartburn.

Q. Is bread which has been kept too long, or in a damp place, so as to become mouldy or musty, fit to be eaten?

A. No; such bread is liable to produce very serious complaints.

Q. Are hot cakes made of flour kneaded with butter or lard wholesome?

A. No; when eaten they soon produce, particularly in weak stomachs, a sense of weight, uneasiness, and acidity.

Q. Are potatoes a wholesome food?

A. There is not a more general food than potatoes, next to bread, in respect to vegetable and farinaceous diet. Whole nations live upon them, dressed or cooked in a variety of ways. They contain much nourishment, and are, therefore, wholesome. Yet some stomachs cannot digest them.

Q. Is fat meat wholesome?

A. The fat of meat is not digestible, and it disorders the stomach to a very great extent, as much as a foreign substance would when put into the stomach.

Q. Is tea a proper article of food?

A. Tea cannot be considered as an article of food, as it contains in itself not the least

nourishment. When drank very strong or in large quantities it undoubtedly weakens the stomach and disorders the whole system. Green tea is more hurtful than black, for it is prepared with a deleterious substance called Prussian blue.

Q. Is coffee less injurious than tea ?

A. From the moderate use of weak coffee, with sugar and milk, little or no injury can result ; when very strong, however, and indulged in daily for a great length of time, it is prejudicial to health.

Q. What effect has chocolate on health ?

A. When perfectly pure, boiled in fresh milk, and drank in moderation, it is both wholesome and nourishing.

Q. Is ripe fruit a wholesome article of food ?

A. It is, when eaten in moderation and with proper precautions.

Q. What are those precautions ?

A. Not to indulge in it when the stomach is loaded with other food ; always to pare it, or remove the external skin ; and of plums, cherries, and the like, always to reject the stones. The inhabitants of the south of Eu-

rope, who eat largely of fruit, never feel any inconvenience from it because they eat bread with it.

Q. Why is it necessary to remove the skin and to reject the stones of fruit?

A. Because the first being tough and indigestible, is liable to remain in the stomach for a long time, and to produce uneasiness, pain, and affection of the bowels; while the latter, when swallowed, have been frequently the cause of most serious injury to the internal parts, or even death.

Q. Is unripe or decayed fruit unwholesome?

A. It is so in the highest degree.

Q. Is baked fruit dressed with sugar injurious to the stomach?

A. Not when it is taken in moderation, and the stomach is not labouring under any complaint.

Q. Is milk a wholesome article of food?

A. Milk and all its simple preparations are among the most wholesome articles of diet.

Q. Are pie-crust and the different kinds of rich pastry wholesome articles of food?

A. To weak stomachs and those of children they are in the highest degree injurious; to

abstain entirely from their use is the wisest rule. Yet such plain crusts may be dressed which will suit a child's digestive powers.

Q. When we feel no appetite for food, cannot we excite one by taking bitters or cordials ?

A. An artificial appetite may in this manner be excited, as I before asserted, but the food that is then eaten will not be so perfectly digested nor yield the same nourishment to the system which food taken with natural appetite is sure to afford.

Q. When an individual has been so unwise as to overload the stomach with food, what ought he to do ?

A. He should abstain entirely for a short time from every kind of solid food, making use of a small quantity of toast-water, thin gruel, or weak broth ; giving in fact the stomach a holiday. Sometimes it is prudent to take an emetic to avoid disease.

CHAPTER VIII.

DRINKS.

Q. Can health be supported without a proper quantity of fluid being drunk?

A. No; the natural sensation of thirst must be satisfied, or disease and even death will be produced.

Q. What fluid is best adapted to quench thirst and to assist in preserving health?

A. Pure water.

Q. In what does the purity of water consist?

A. In its being free from all vegetable, mineral, or animal substance, whether dissolved in or only mixed with it.

Q. By what characters do you distinguish pure from impure water?

A. Water may be considered pure when it is perfectly transparent, without any sensible smell or any peculiar taste, when it readily

dissolves soap, and when peas or beans being boiled in it, they soften readily.

Q. Is there any harm in drinking water which does not present these characters?

A. The purer the water the healthier will the individual be who drinks it; to drink water which is not of very considerable purity is likely to produce disease.

Q. Which are the purest waters?

A. Rain water, the water of rivers running over a gravelly or rocky bed, and snow water.

Q. Which kind of water is likely to produce the greatest injury to health if drank constantly?

A. Water strongly impregnated with metallic, saline, or other mineral substances, and the water of marshes or stagnant pools and ponds.

Q. Cannot impure water be rendered by any means fit to drink?

A. Yes: water containing saline or mineral substances may be rendered pure by distillation, and water which has become corrupt, may be improved by simple filtration through successive layers of coarse white sand and powdered charcoal.

Q. Why is pure water the most wholesome drink ?

A. Because no other so effectually assists the digestion of our food, by dissolving it, and diluting it in the stomach, thereby assisting in preserving the blood sufficiently fluid, so as to ensure its free and equal distribution through all the vessels of the body.

Q. What advantage does an individual derive who, while at the same time that he takes sufficient exercise in the open air and eats in moderation of wholesome food, drinks nothing but pure water ?

A. He becomes strong and robust, is free from febrile diseases, cheerful and contented, and lives, in general, to an advanced age.

Q. Do not people who labour much and are exposed to fatigue require a stronger drink than water ?

A. No ; not so much as might be imagined. Coalheavers for instance could not well go through their work if they drank nothing but water, because perspiration flowing freely they would neither derive support from water, nor could they quench thirst sufficiently ; but many other labourers by confining them-

selves to pure water, have been better able to fulfil their task than by the use of stronger liquors.

Q. Will not the use of water alone be apt to render the body chilly in cold and damp weather?

A. Water is not liable to that objection, except when by peculiarity of individual constitutions it proves indigestible. This is the case with persons who perspire with difficulty.

Q. May not an individual injure himself by drinking too much water?

A. If we drink frequently (and very large draughts) of water, the stomach will become too much distended, in consequence of which the proper digestion of the food is retarded, and other injurious consequences are produced.

Q. Is there any precaution we should observe in drinking water during very warm weather?

A. Never to drink it cold when we are suffering from fatigue, or excessive heat, or are in a profuse perspiration.

Q. Is it not proper in warm weather to add a portion of brandy, gin, or spirits to the water before it is drunk?

A. Some think that such mixtures are always prejudicial to health, and that persons who make use of them are liable to become drunkards. But, this is an unqualified opinion which calls for much modification. Occasionally a little spirits in water will be found to obviate the mischief produced by its being drank cold. Such an addition to water, moreover, corrects some of its bad qualities if the water happens to have any—and lastly, it will ensure a greater facility of quenching thirst, whereby the drinking of large quantities of water is avoided. In addition to which, it may be truly stated that there are people who can drink a weak mixture of spirits and water not only without becoming drunkards, but with manifest benefit to their health.

Q. What is the best addition that can be made to improve the taste of water?

A. Water in general requires no addition to render it palatable to a healthy stomach; those who choose it, however, may add to the water a little sugar, or lemon juice, or some other vegetable acid, such as cream of tartar and raspberry vinegar.

Q. Next to pure water what is the most wholesome drink ?

A. Fresh milk, buttermilk, or whey; but the latter in particular.

Q. Are not toast and water, barley water, and other such modifications of pure water preferable to many stomachs ?

A. They are so, particularly the former, which, from the circumstance of containing the soluble parts of bread, conveys nourishment in a bland manner to the stomach while it quenches thirst.

Q. Is wine a wholesome beverage ?

A. Taken in moderation it imparts a degree of momentary vigour, which, to some persons, is essentially necessary. The wine, however, so taken, should be old and of the best quality, and two glasses the utmost quantity of it. When drank freely, as was once the more general custom of this country, particularly after dinner, (on which occasion glass after glass of one or more sorts of wine was drank without the least necessity, but merely to kill time,) wine proves injurious to the stomach, and ultimately to the constitution, and leads to pernicious consequences.

Q. It is said that wine aids the digestion of our food ?

A. In some cases it does so ; but depend upon it that those who drink pure water only, have always a keener appetite for their food, and digest it better than those who drink wine.

Q. Should wine be permitted to children ?

A. No ; wine in any quantity is injurious to the health of young persons, except when recovering from some great illness, or in a state of excessive languor of the circulation.

Q. Is beer, ale, or porter a wholesome drink ?

A. By persons in perfect health either of them may be drank occasionally, and in moderation, without producing injurious consequences.

Q. May they not be used as a common drink ?

A. Sparingly ; for if the quantity be large, they produce an unnatural embonpoint, injure the digestive powers of the stomach, cause drowsiness, depression of spirits, pain and giddiness of the head, and render the system liable to sudden death, particularly if the stronger porter be used.

Q. What class of people ought in parti-

cular to be very cautious in the use of these liquors ?

A. Those of full habits, with short and thick necks ; those inclined to corpulency ; and those troubled with frequent drowsiness, giddiness of the head, &c.

Q. What injury will such persons receive from the habitual use of beer, porter, or ale ?

A. They will be very apt to bring on apoplexy.

Q. Does not porter or beer, when given to children, increase their strength ?

A. No ; all other drinks are injurious to children excepting water, milk, or some equally mild liquid. Cases, however, occur, in which a small quantity of mild ale has proved beneficial to children and young persons of both sexes.

Q. Is cider or perry a wholesome drink ?

A. What is termed sweet cider and well-seasoned perry, when drank in moderation, agree well with most persons in health during the summer season.

Q. May not the same be said of the other kinds of cider ?

A. No ; the stronger kinds of cider, except-

ing when largely diluted with water, cannot be drunk in any quantity without disordering the stomach and bowels, and producing other injury to health.

Q. Are such liquors as are obtained by distillation proper to drink ?

A. No ; brandy, spirits, gin, and rum, in whatever quantity they may be drunk, are all injurious to the health of the system.

Q. Is their moderate equally injurious with their immoderate use ?

A. Certainly not ; nevertheless their habitual use, even when the quantity taken each time is but small, may prove injurious to some stomachs ; while it often happens that the daily indulgence, even of a small quantity of such liquors, leads insensibly to the use of more, until habits of confirmed drunkenness are acquired.

Q. Does not the use of distilled spirits tend to nourish the body ?

A. No ; distilled or ardent spirits are incapable of being converted by the stomach into blood, flesh, or bone. Their use, on the contrary, prevents the nourishment of the system from taking place.

Q. Does not their moderate use augment the appetite and assist the digestion of our food ?

A. The daily use of distilled spirits may create an artificial appetite, or prolong the desire for food after the natural wants of the system are satisfied ; but it does not follow that the process of digestion is aided by it.

Q. Is not the strength of those engaged in laborious occupations supported by a moderate use of spirituous liquors ?

A. No; on the contrary, when habitually used, spirituous liquors invariably diminish the strength and vigour of every class of persons.

Q. Is the use of distilled spirits liable to create disease when not carried to the extent of producing intoxication ?

A. Yes; their habitual use, even though a state of actual intoxication should never be experienced, is capable of producing some of the most serious diseases to which the human system is liable.

Q. Is it not a vulgar opinion that a moderate use of distilled spirits will prevent the system

from experiencing the injurious effects of cold and dampness?

A. The case is not so: for those who drink nothing but water are far less liable to suffer from exposure to cold and dampness, than such as attempt to fortify their systems by the use of brandy, gin, and other ardent spirits in the morning or during the night.

Q. What invariable effects result from the intemperate use of distilled spirits?

A. The entire destruction of health, happiness, reason, and virtue.

Q. When distilled spirits are taken in the form of punch, or mixed with sugar and water, are they as injurious to health as when drunk by themselves?

A. It requires a greater quantity of such mixtures to be drunk in order to produce the same injury as results from ardent spirits alone; but independently of other bad effects, an indulgence in the use of punch, or brandy and gin and water, is likely to create an appetite for stronger liquors, and induce habits of intemperance.

Q. Is it beneficial to the stomach to take

what are called bitters in the morning, or before a regular meal?

A. Few habits are more destructive to the appetite, or more effectually impair the healthy condition of the stomach. It is to drink spirits in disguise.

Q. When we feel weak, languid, or exhausted from fatigue, is it not proper to take a moderate quantity of distilled spirits in order to rouse and invigorate the system?

A. There are very few genuine instances, indeed, in which such an effect is likely to be produced by such means. We are apt to deceive ourselves on this point, for the strength and vigour derived from the use of distilled spirits, under such circumstances, is only momentary, and is succeeded always by a greater degree of weakness and depression.

Q. What means then should be adopted to relieve the system from a state of fatigue and exhaustion, without the risk which always attends the use of ardent spirits?

A. Rest, and a small quantity of light nourishment, and a glass of wine.

Q. When the body has been exposed to

wet and cold, instead of resorting to stimulating drinks, what ought to be done?

A. To remove entirely the wet or damp clothing; to bathe the body in warm water; or to retire to bed and drink moderately of some warm liquid, such as weak balm or sage tea, warm lemonade, tea, coffee, or a tumbler of hot water with half a wine-glass-full of white wine.

Q. Do cordials form a wholesome drink?

A. On the contrary, they are all highly injurious to the stomach and to health generally; some, as noyeau, contain a very active poison, namely, prussic acid.

Q. What, then, are we to conclude in regard to the use of fermented and distilled liquors?

A. That the former can be used only in very moderate quantities without producing injury; and that the latter should be entirely abstained from by all who have any regard for their health and happiness.

Q. What are the characteristics of an habitual water drinker?

A. Provided he use, at the same time, regular active exercise in the open air, he who habitually drinks water will boast of his appe-

tite being always good, his digestion easy, his body strong and vigorous, his sleep sound and quiet, and his head clear. He enjoys an almost entire exemption from disease, and he lives cheerfully and contented to a good old age.

CHAPTER IX.

OF SMOKING AND SNUFF TAKING.

Q. Is chewing and smoking tobacco and taking snuff injurious to health?

A. In most cases.

Q. In what manner does tobacco injure health?

A. Tobacco is a narcotic and depressing poison, whose effect on the nerves and stomach is to destroy the appetite, prevent the perfect digestion of food, create an unnatural thirst, and render the individual who uses it nervous and otherwise infirm.

Q. Besides these bad effects arising from using tobacco, what other injury is produced by the practice of taking snuff?

A. It destroys the sense of smell, and causes a very disagreeable alteration in the tone of the voice. It also produces head-ach in the course of time; and by the distillation of its juice which falls from the posterior

nostrils into the stomach during sleep, gives rise to weak and painful digestion.

Q. Are those who use immoderate quantities of tobacco peculiarly liable to become drunkards?

A. From the great thirst and alteration in the sense of taste which are occasioned by the use of tobacco, particularly in smoking, a fondness for stimulating liquors is often contracted.

Q. What advantage can result to the system from the use of tobacco, which can counterbalance, in some degree, its injurious effects on the constitution?

A. I am not aware of any; its use is to be attributed entirely to a depraved appetite.

Q. Is not snuff supposed to do good in some disorders of the head?

A. Some physicians have recommended its use to produce sneezing, when such an action is expected to relieve the head from too much blood or obstruction. It is certain that in some cases of affection of the head, snuff, to those not personally accustomed to its use, has been of service.

CHAPTER X.

PERSONAL CLEANLINESS.

Q. Is the preservation of cleanliness in every part of the body essential to health?

A. Yes; it is an indispensable means for securing health, vigour, and longevity.

Q. Are there any diseases which owe properly their origin to a want of personal cleanliness.

A. Yes; various eruptions or breakings out on the skin. Many affections of the stomach and bowels are also due to it from the insensible absorption of dirt by the skin, and the check given to the exhalation natural to that part; some malignant fevers are likewise produced by a neglect of personal cleanliness.

Q. In what manner is personal cleanliness to be maintained?

A. By daily washing every part of the body in pure soft water, with the addition of soap, a brush, and a rough towel.

Q. Is nothing else required?

A. Yes; at short intervals the use of a bath, either of water, heated air, or of vapour, will be extremely beneficial.

Q. With all these precautions may we not suffer from uncleanliness?

A. Yes; if our clothes be not preserved perfectly clean, and those worn next to the skin frequently changed.

Q. How often is it necessary to wash the hands and face?

A. In the morning immediately after rising, and in the evening before retiring to rest; previously to every meal, and as often as they are by any means unusually soiled.

Q. How frequently should the feet be washed?

A. Every evening before retiring to bed: always in tepid water.

Q. How often should the whole body be cleansed by bathing?

A. In summer every day if convenient, and in winter at least once a week.

Q. What rules should be observed in bathing?

A. 1st. Never to use the bath immediately after a meal. 2nd. Not to enter a Cold Bath

if the body is labouring under fatigue, is chilly, in a state of profuse perspiration, or in any manner enfeebled. 3d. To use, in preference to a Cold Bath, one the water of which has been warmed to about 70 degrees of our common thermometer in summer, and one the water of which is 90 or 96 degrees in winter.

Q. On coming out of the bath what must be done?

A. The whole surface of the body must be made perfectly dry by rubbing it with a coarse cloth, after which we should rest, stretched on a sofa for some little time, until the temperature of the body is again become natural, when some gentle exercise should be taken. It is dangerous to sit on the damp ground, or in a draft of air, after coming out of the bath.

Q. State the advantages which are likely to result from frequent bathing?

A. Independently of its effects in cleansing the surface of the body, it renders the skin soft and flexible, and places it in the condition best adapted for the performance of its important offices. The Warm Bath, in particular, removes the sense of soreness and fa-

tigue produced by over exertion or hard labour, and facilitates the free circulation of the blood throughout every part of the system.

Q. Is it desirable that we should wash the head frequently?

A. Yes; the frequent washing and combing and brushing of the head promote the growth and beauty of the hair; prevent the appearance of disease at its roots, the accumulation of scurf, and tend to ensure the preservation of health generally.

Q. Is it necessary to rinse frequently the mouth?

A. Yes; in the morning after rising, and in the evening on going to bed; also immediately after each meal, the mouth ought to be well rinsed with water, applying at the same time gentle friction to the gums by means of a brush; in this way the teeth will be preserved sound, and the occurrence of tooth-ach prevented.

Q. Do you recommend tooth-powder?

A. Prepared charcoal, which consists of powdered burnt wood and chalk, forms an excellent powder for cleansing teeth, and keeping the breath sweet; where teeth are

decayed, the brush should occasionally be dipped in tincture of myrrh. This will also brace the gums when flabby. There are several desirable preparations in the trade, sold as tooth-powders; but the one I prefer for polishing the teeth, after cleansing them] with prepared charcoal, is "Murphy's Preservative Tooth Powder," sold at Leeds.

Q. Is it sufficient for the preservation of health that the body only be kept perfectly clean.

A. No; it is essential that the same attention to cleanliness be observed in respect to our clothing, our apartments, our houses, our furniture and our beds.

CHAPTER XI.

CLOTHING.

Q. What is the first general rule in regard to clothing?

A. That in quantity and in the texture of the stuff of which it is composed, it be adapted to the climate in which the individual resides, and to the warmth or coldness of the season.

Q. Ought we to clothe ourselves very warmly?

A. To prevent in cold weather the least sensation of chilliness, by a sufficient number of clothes, is important; beyond this all additional clothing is useless and cumbersome.

Q. Is it necessary that the body should be clad more warmly during cold weather, when in the open air, or in a state of rest in a cool situation, than when in a warm apartment, or during active exercise?

A. Yes; under the former circumstances an additional quantity of clothing is always

necessary in order to guard against the effects of cold.

Q. What is the second important rule in regard to clothing ?

A. That it be sufficiently loose, so as to allow to every part of the body the freest motion.

Q. What injury can result from a particular part of the body being firmly compressed or tied by any part of the clothing ?

A. Its natural motions being impeded, the blood is not able to circulate freely through its vessels ; hence its full growth is prevented, deformity and disease often arise, and the muscular system lacks its daily restoration of vigour.

Q. Then the health of females must suffer from having the chest and waist tightly compressed by stays and corsets ?

A. It suffers to a very great degree.

Q. In what manner ?

A. As the ribs are prevented from rising freely in the act of breathing, the lungs cannot fully expand so as to take in a sufficiency of air for the necessary change in the blood : hence these organs, and, through them, every other part of the body, eventually suffer.

Q. Then if corsets are worn by very young persons, the evils resulting must be considerable?

A. They are so; the chest never acquires its full and natural dimensions; the lungs and heart, for want of room, cannot perform properly their natural offices and movements, and soon become the seat of serious disorders.

Q. Does the pressure of corsets, or other parts of our clothing, over the stomach, produce injurious consequences?

A. Yes; even so slight a degree of pressure as that which we experience arising from leaning the stomach against the edge of a table or desk prevents the perfect digestion of the food.

Q. What bad effects result from tight garters and similar bandages on the legs?

A. In children the proper growth of the leg is prevented, while in older persons a painful eruption and unsightly swelling of the veins of the legs, and swelling of the feet, are produced.

Q. What is a third general rule in regard to clothing?

A. That whatever is worn next to the skin

be made of a material which is a bad conductor of heat.

Q. What is meant by a bad conductor of heat?

A. A substance which does not readily allow the heat to pass through it.

Q. What is the great advantage of wearing such a substance next to the skin?

A. It prevents the body from becoming readily chilled when damped by perspiration, and from too readily feeling the effects of sudden or slight changes in the temperature of the air.

Q. What substances possessed of this quality can be worn as an under garment?

A. The best are soft loose flannel, calico, washed leather, and knit cotton stuff quite elastic. The latter is preferable in summer: the washed leather is best used in winter. This applies more particularly to the aged and sickly.

Q. To what particular class of persons is flannel next to the skin an almost indispensable means for the preservation of health?

A. To all mechanics and labourers who are exposed to frequent transitions from heat to cold; to all who work in wet or damp situa-

tions; and to all who are much exposed to the open air at night. To persons of a very nervous temperament the use of flannel is objectionable—for it tends to keep up a state of high electricity of the skin, which is productive of many unpleasant effects, the least of which is constipation of the bowels.

Q. What covering should be worn upon the head?

A. One perfectly light, and which, while it guards the head during the heat of summer from the action of the sun, preserves it as cool as possible.

Q. What inconvenience results from too heavy and warm a covering to the head?

A. It produces head-ach, an eruption or breaking out about the roots of the hair, pimples on the forehead, and exposes the individual to apoplexy, and other diseases of the brain.

Q. Is it important to keep the feet warm and dry?

A. Yes: cold and wet feet are a fruitful source of catarrhs, pleurisy, and consumption. No person who is in perfect health ever complains of cold feet.

Q. How are the feet best preserved from cold and wet?

A. By wearing small cotton or fine woollen socks, just to cover the toes and heels, over which cotton or silk stockings are used. The wearing of fine silk stockings in immediate contact with the feet, as the ladies generally do, is highly injurious; the feet then are never warm. Stout or light leather shoes or boots are worn over all according to the season.

Q. Are the thin soled silk slippers generally worn by females a sufficient protection for the feet?

A. They are only suited to very warm and perfectly dry weather, or in the house; in cold and wet weather they ought to give place to thick soled leather shoes or boots.

Q. Ought those who wear an additional garment of flannel or cotton next to the skin to retain it during the night?

A. Excepting in very aged or debilitated persons it is always better to throw it off on retiring to bed; or in winter to change the flannel garment for one of cotton.

Q. Is the comfort of the feet promoted by the size and shape of the shoe?

A. Yes; unless the shoe be sufficiently large to accommodate the foot in its expansion, or during walking exercise, and correspond exactly to the shape of the latter, the greatest inconvenience is experienced.

Q. In what does that inconvenience consist?

A. The feet being unduly compressed by too small or misshapen shoes, their natural motions are prevented; causing a hobbling and ungraceful gait, and rendering walking a pain rather than a pleasure.

Q. Are there not more serious and permanent inconveniencies to the feet which result from a too small or badly-shaped shoe?

A. The toes become successively covered with corns, more or less painful; large hard swellings or bunions are produced at the joint of the great toe; the flesh at the outer edge of the toes is caused to ride over the nail, giving rise to a painful and dangerous sore; and the individual is, in fact, often rendered a cripple for life.

Q. What is to be observed in regard to the covering for the neck?

A. That it be very light, and worn sufficiently loose.

Q. What injury is produced by wearing on the neck either a thick or too warm a covering or handkerchief?

A. It renders the throat peculiarly liable to disease from slight exposures to cold; and very frequently is the cause of tumours or swellings of the glands of the neck externally.

Q. What bad consequences result from the cravat being too tightly drawn around the neck?

A. If the cravat compress in the slightest degree the neck, it impedes the free motion of the head; produces an over-fullness of the vessels of the head and face, a tumid, bluish, and bloated appearance of the latter, constant head-ach, and increases the liability to apoplexy and other diseases of the brain, giddiness, noise in the ears, &c.

Q. At what particular periods should the neck be perfectly free from compression?

A. During the period of sleep; when the body is engaged in active exercise, or any laborious occupation requiring stooping; and when the mind is occupied in study.

Q. To what class of persons would a warm and tight covering to the neck more particularly be injurious?

A. To those who are frequently affected with headach: to those who are fat, with short necks and large heads, and to all who have large and prominent veins, and very florid complexions.

CHAPTER XII.

PRESERVATION OF THE EXTERNAL ORGANS OF
SENSE.

Q. Are there any means by which the External Organs of Sense may be preserved and strengthened ?

A. So intimately connected is the sense of Sight, Smell, Hearing, Taste, and Feeling, with the general health of the body, that whatever is calculated to improve the latter has a tendency to do good to any of the former.

Q. Enumerate the means which are calculated to preserve, improve, and strengthen the External Senses ?

A. First, temperance in eating and drinking; secondly, regular bodily exercise; thirdly, a proper quantity of sleep; fourthly, pure air; fifthly, clothing adapted to the seasons; and lastly, the most scrupulous attention to personal cleanliness.

Q. Without reckoning accidents and the

natural wear and tear of the respective organs of sense, what other cause would be injurious to the senses of sight, hearing, and smelling ?

A. Whatever has a tendency to keep the head too warm, such as heavy and tight hats, caps, or other coverings, the neglecting to keep the hair thin, short, and clean ; and the sleeping on soft pillows of down or feathers.

Q. In what manner do these circumstances injure the senses referred to ?

A. By causing too much blood to flow into the vessels of the head and face, and by rendering the eyes, nose, and ears peculiarly susceptible of inflammation from the slightest impressions of cold.

Q. Besides the foregoing, what other circumstances are especially injurious to the sight ?

A. A long continuance in absolute darkness, or frequent and protracted exposure to a blaze of light, whether from the sun, lamps and candles, or a bright and intense fire ; all sudden changes from darkness to light ; reading, writing, or sewing in the dusk of the evening, in consequence of which the sight is strained, or by a lamp or candle for a long time together, by

which the eye is much fatigued ; the habit of viewing objects at too short a distance from the eyes, or when they are not placed in the direct line of vision ; dust, smoke, irritating vapours, frost, and in fact every thing that has a tendency to irritate the eyes. In addition to which, many disorders of the stomach, protracted headachs, and the taking of certain medicines, are calculated to impair vision.

Q. How are the organs of smell particularly injured ?

A. By breathing an impure air, or one loaded constantly with strong or disagreeable odours, by inhaling stimulating gas, by the use of snuff, and by frequent exposure to dampness and cold, or by excessive dry heat.

Q. What is likely to prove hurtful to the sense of hearing ?

A. Very loud, harsh, and unexpected sounds or reports of guns ; all external coverings to the ears ; too damp an atmosphere, or one loaded with dust, and also whatever tends to prevent the free passage of the air through the nose, as snuff, the accumulation of wax in the passage, &c.

Q. What circumstances are particularly injurious to the sense of taste?

A. The use of ardent spirits and of hot spices; the immoderate use of wine; chewing or smoking tobacco; intemperance in eating; highly-seasoned cookery; sipping boiling hot tea, or eating ices frequently.

Q. What is particularly injurious to the sense of feeling?

A. Neglect of cleanliness, or of regular exercise in the open air, and such diet as tends to produce too great an accumulation of fat under the skin.

Q. Is it not important to attend to the preservation of the teeth?

A. Certainly; a well-proportioned and complete set of teeth is not only a great feature in our personal appearance and essential to a distinct pronounciation, but is also necessary for the complete mastication of the food, upon which depends in a very great measure, its proper digestion, and as a consequence, the due nourishment of the body.

Q. In what manner are the teeth injured?

A. By intemperance in eating and drinking; by unwholesome aliments; by swallow-

ing articles of diet either too hot or too cold ; by grinding very hard substances ; by allowing small portions of the food to remain between them ; by breathing an impure or confined air ; by the imprudent use of mercury and strong purgative medicines ; by picking them with a hard non-elastic instrument ; by smoking segars or pipes ; by the use of very hard brushes or improper tooth-powders, and by the too frequent recourse to a dentist.

Q. What should be done, therefore, in order to preserve the teeth sound?

A. Every species of intemperance, as well as the use of tobacco, should be avoided ; our food should be taken neither too warm nor too cold, and the solid parts of it slowly and completely masticated. The mouth should be carefully and repeatedly rinsed out with pure water immediately after rising in the morning, and after each meal ; every portion of food which adheres between the teeth should be carefully removed by a quill properly pointed, and the teeth rubbed inside and out by means of one or more brushes of different degrees of softness.

Q. Is bodily exercise likely to assist in preserving the teeth ?

A. A sound condition of the teeth being intimately dependent upon a healthy state of the stomach, there can be little doubt that regular exercise in the open air is as necessary for the preservation of the one, as it is for that of the other.

Q. What tooth-powders and applications to the teeth are particularly injurious to the latter?

A. All such as are of a hard, gritty nature, and all acids.

Q. Is the use of sugar injurious to the teeth?

A. It is not in a direct but in an indirect manner, that sugar proves injurious to the teeth; for as large quantities of it disorder the stomach, it may, in that way, become injurious to the teeth.

Q. Is the preservation of the first set of teeth of much importance in childhood?

A. It is; for when these become decayed, the rudiments of the permanent set of teeth are frequently destroyed; or even when this is not the case, the latter are always very seriously injured.

Q. If attention be not paid from the first

appearance of the permanent teeth to their preservation, can the injury which they sustain be repaired?

A. Seldom; yet by temperance, cleanliness, the proper mastication of the food, pure air, and frequent gargling of the mouth with water,—the teeth, though injured, may be preserved frequently from further decay.

Q. What are some of the most common causes of toothach?

A. Besides decay of their substance and exposure of the nerve, teeth are likely to ach from exposure to cold and dampness without proper clothing, from frequently having wet feet, from not keeping the head sufficiently cool, and from scaling them too often.

Q. May not the teeth be injured or destroyed, and toothach be occasioned, by attempting to improve the beauty of the face by means of paints and lotions?

A. Yes. The paints or lotions usually applied to the face contain frequently preparations of lead, mercury, zinc, or bismuth, the pernicious effects of which frequently manifest themselves in the production of severe pains in the jaws and teeth, or in the complete destruction of the latter.

Q. What is essential to the formation of a clear, distinct, and pleasing voice in speaking and singing?

A. The voice cannot be clear, distinct and pleasing, unless the teeth, particularly those in front, be sound; the mouth free from any foreign substance or impediment; the nostrils perfectly free, so as to enable the air to pass through them in breathing; the neck but loosely and thinly covered; the inside of the throat free from swellings, thickening of the membrane, or any other disease; and the chest relieved of all external restraint.

Q. Is an excess of saliva injurious to health?

A. An excess of saliva is more generally the effect rather than the cause of bad health. Yet when such an excess has long existed, it produces debilitating consequences and becomes seriously prejudicial by interfering with digestion, either because too much saliva during mastication spoils the food, or because the flow of saliva which takes place at times, leaves the mouth in a dry feverish state during certain periods, and indisposes that part to the healthy discharge of its function.

Q. What causes an undue discharge of saliva?

A. Eating decayed cheese and peppery dishes, using mercury and mineral acids, the exhalation of some mineral vapours, the present fashion of smoking segars, smoking in general, and chewing tobacco.

CHAPTER XIII.

HOW TO AVOID THE EFFECTS OF COLD AND
DAMPNESS.

Q. How are the injurious effects from exposure to cold and dampness to be avoided?

A. By a temperate course of life, by sufficient and proper clothing, and by keeping the body in constant motion during the period of such exposure.

Q. When are we most liable to suffer from cold or dampness?

A. After an excess in eating or drinking; when fatigued, or in a state of perspiration; when at perfect rest, in the open air, or in a draught or during sleep; and when exposed to cold easterly winds, with less clothing than is usually worn.

Q. When in consequence of violent exercise or fatigue, or dancing, running, &c. the body has been overheated, what ought to be particularly avoided?

A. Sitting or lying down on the ground, or

standing still with the feet placed on stones, marble pavements, or floor-cloth, as is the case when ladies with thin shoes on are waiting in halls for their carriages, in a current of air, or in any damp or cool situation. Drinking large draughts of cold or ice water immediately after such violent exercise, or entering a cold bath, a cellar, vault, or ice-house, or throwing off any portion of the clothing, in order rapidly to cool ourselves.

Q. What can result from neglecting any of these precautions?

A. Violent colds, pleurisy, rheumatism, affections of the bowels, or other serious complaints.

Q. When from any cause an individual is overheated, or in a profuse perspiration, what should he do?

A. He should persevere in a gentle degree of exercise, until, at least, he is enabled to exchange such portions of his dress as have become damp with the perspiration, for others perfectly dry and clean. If the thirst be considerable, it may be quenched by swallowing slowly a moderate portion of cool, but not cold water; he should then rest himself

within doors in a dry apartment, from which every current of air is excluded. I have often found a cup of weak tea, quite hot, with a few drops of lemon juice, or even plain boiling water, to quench thirst sooner, and in a more pleasing and inoffensive manner, than it could be done by any other means.

Q. During labour or exercise in warm weather, how may thirst be allayed without any risk to health?

A. By drinking slowly and in moderation of river water, or that which has been exposed for some hours to the open air. Immediately after drinking, the individual should return to the labour or exercise in which he had been previously engaged.

Q. Are no additions to the water proper?

A. Yes; when agreeable to the palate, sugar, milk, or a small quantity of vinegar or lemon juice may be added to the water.

Q. Can nothing be substituted for the water?

A. Buttermilk or whey, when it can be readily procured, will be found by many a very pleasant and wholesome beverage for quenching thirst during labour in warm weather.

Q. When in summer a person's clothes become wet from a shower of rain or other cause, what should he do ?

A. He should remove them with the least possible delay, and before fresh garments are put on, his skin should be rubbed perfectly dry. If this cannot be done immediately, we should in the mean time use some brisk exercise.

Q. If by accident, and notwithstanding every precaution, we have been exposed to cold and wet, what course should we pursue ?

A. The same course should be pursued as in the former case. If, however, the exposure has been of any continuance, or the cold considerable, we shall more readily escape injury if we enter a warm bath, or at least have our feet and legs bathed in warm water; while frictions are applied to the rest of the body. After this we should retire to bed, and drink moderately of some warm weak tea, or gruel. In all such cases, however, we cannot hold ourselves safe from colds, unless we promote free perspiration in bed.

Q. Have you any thing to say respecting wet or damp feet ?

A. Exposure of the feet to wet or damp is a fruitful cause of serious disease, particularly of the head, throat, and chest; hence the importance of a careful attention in preserving the feet dry and warm.

Q. When from unavoidable exposure or some accidental cause, the shoes and stockings have become damp or wet, by what means may we prevent any injurious consequences?

A. In warm weather by immediately removing the shoes and stockings, and, before putting on others, rubbing the feet perfectly dry: but when in very cold weather the feet have become wet, bathing them in warm water and retiring to bed is the most prudent plan.

Q. If a person is obliged to pass the night in a damp chamber, what precautions should he take?

A. A fire should be lighted and allowed to burn for two or three hours previously to his retiring to bed: the bed should be removed to some distance from the walls, and if, on examination, the bedclothes be found to be in the least damp, they should be thoroughly

dried before the fire. Few things produce more certain injury to health than the occupying of a damp bed. A still greater precaution, however, in such untoward instances, is to sleep with drawers on and in a dressing-gown, or between the blankets with a nightcap on.

Q. What precautions should be observed by those who are obliged to expose themselves to the night-air during the summer and autumnal months?

A. They should observe a strictly temperate diet. During exposure they should always wear woollen garments, and flannel next to their skin; remain at rest as little as possible; neither sit nor lie upon the ground, and above all never fall asleep during the period of exposure.

Q. What class of persons should avoid, with more especial solicitude, every exposure to cold and dampness?

A. Those who are peculiarly subject to colds, sore throats, pleurisy, rheumatism, and those who are predisposed to consumption.

Q. What plan can such persons pursue to guard against the ill effects of such exposure?

A. Their best plan is to accommodate their dress to the changes of the weather; to wear during damp and wet seasons a flannel shirt and drawers, with woollen stockings and thick boots; invariably to assume a similar dress previously to the setting in of the winter season, and not to leave it off until late in the spring. By these precautions, together with a sufficient quantity of clothing generally worn, regular exercise in the open air during dry weather, and proper precautions in regard to the dryness and temperature of their sitting-rooms, they will be enabled, very generally, to escape any injury from the effects of cold and dampness.

CHAPTER XIV.

MEANS OF SECURING THE BEAUTY AND SYMMETRY OF THE BODY.

Q. Upon what is the physical beauty of man intimately dependent?

A. Upon the health, the full development, and the perfect symmetry of his body.

Q. In what manner may these advantages be secured?

A. By the means which have been already pointed out; especially by temperance, and the free and regular exercise of the body in a pure air, commenced with in early life, and persevered in daily.

Q. What means are best calculated to secure that freshness and brilliancy of the complexion, regularity of features, and vivid expression of the eyes, which are so essential to the beauty of the face?

A. Once more I say pure air and regular exercise. Washing daily with water, and fre-

quent bathing; a light easy dress, adapted to the temperature of the season; and a simple wholesome diet.

Q. How can the full growth and symmetrical development of the body be promoted?

A. By avoiding sloth and inactivity, and too much confinement within doors, or in a sedentary posture; by rejecting all such articles of dress as bind, or press upon any part of the body more than on another; by avoiding gluttony, and every species of intemperance; and in our exercises, to shun all such as call into action only a part of the muscles of the body, to the exclusion of the rest.

Q. What will secure the full and perfect development of the body during youth?

A. Frequent indulgence in childish sports and gymnastics, and placing the body in becoming attitudes and proper postures.

Q. What postures are best adapted to promote our growth and beauty during childhood?

A. The erect and the perfectly horizontal posture. In standing or walking, the head and breast should be elevated, and the weight of the body made to rest equally upon both legs.

In lying down, the body should be stretched out, and none of the limbs bent.

Q. What positions of the body are more likely to occasion permanent deformity?

A. All such positions in which the body is bent to one side, or forwards, when continued for any length of time or frequently repeated; leaning both arms or the breast upon a table when occupied in reading or writing; an habitual negligence in the carriage of the body either when walking, standing, or sitting; hanging down the head or bending the neck forwards, or on one side, especially when speaking, or attentively listening; looking askance at objects, &c. When a child is found to have contracted any of these tricks, and to show the first symptoms of deformity, the simplest as well as the most effectual plan is to make it lie down on the rug before the fire-place, twice or three times a day, perfectly flat and on its back, with the ankles and knees kept in strict contact by tying them together with a soft pocket-handkerchief, and with the arms lying stretched by the side of the body. In cases where the child is inclined to fulness in the head, but not other-

wise, that part may be raised a couple of inches, on one of the air-pillows now in fashion, which should only reach the nape of the neck, and not get under the shoulders. This plan of curing and preventing early deformities, is preferable to that of inclined planes, which are worse than useless, for they are injurious.

Q. Are there any cautions with respect to the bed occupied by a young person which are necessary, in order to prevent deformity of the body?

A. Yes; in the first place, care should be taken that the head and shoulders are not too much elevated by a large pillow or bolster; and next, the bed should be of sufficient firmness to prevent the hips from sinking into it. If these cautions be not attended to, the back is very apt to get permanently twisted, one of the shoulders will be higher than the other, the head will be inclined to stoop forward or lean ungracefully on one side, and the height of the child will be materially impeded.

Q. Ought young people, when two of them sleep together, to be allowed to occupy always the same side of the bed?

A. It is better that they should change

sides frequently; otherwise, they would contract certain permanent attitudes in proportion to their fancy and fondness for each other, which would lead to a disfigurement of the body.

Q. Is the same injury liable to result from sitting always at the same side of the table, or window, when at work ?

A. It is. Young people, when the position in which they sit is not frequently changed, acquire a practice of bending habitually to one side, from which a permanent twist of the body in that direction is to be feared.

Q. Has the foolish habit which many young persons indulge in, of contorting their features, or of shrugging their shoulders and performing similar gesticulations, any permanent influence upon their physical beauty ?

A. All these practices, which are in the highest degree ungraceful, when frequently indulged in, are very apt to become habitual, that is, to be repeated involuntarily: this being the case, the manner in which they injure the beauty of the individual will be readily understood.

Q. May not these practices be occasionally acquired involuntarily?

A. They may: thus when a lively and active child is kept for many hours in a room, without being allowed to vary his posture, or when he is constrained to apply himself, too long at one time, to his books, he becomes restless, and is very liable to acquire involuntary twitchings of the face or limbs.

Q. Is the habit of squinting ever acquired by improper practices?

A. It is often acquired by a want of care in accustoming infants and young children to view objects with both eyes equally; or by allowing them habitually to look at objects placed too much on one side, and not in the direct line of vision.

Q. Has not squinting been known to occur in children from wearing caps, the sides of which projected so as to catch their attention?

A. In many instances: but squinting often arises from an irregular action of the muscles of the eye and other maladies. It is also not unfrequently the result of imitation, when the child has a squinting nurse or play-fellow. The mode of correcting this defect

is to close the eye which does not squint by means of a green patch, and to cover the squinting eye with a blind spectacle of paste-board or gogle, having a hole in the centre, through which the child will be obliged to look. Similar contrivances will succeed where the child squints with both eyes

CHAPTER XV.

MISCELLANEOUS SUBJECTS.

Q. Does not the occasional administration of medicine tend to the preservation of health?

A. If the person who takes an occasional dose of medicine with the view of preserving health or preventing an expected disorder, be known to have a predisposition to that disorder, the practice is useful and to be commended. Not so, if the administration of medicine take place indiscriminately, and without well-grounded reasons. In that case the practice will be productive of injurious consequences to the constitution.

Q. But in cases where constipation of the bowels obtains to an obstinate degree, and none but medical or artificial means can stimulate them to their proper action, the habitual taking of such medicines as will obviate so prejudicial a state of things cannot, surely, be improper?

A. You are right, so far as to a certain given

effect which you may wish to produce ; but then the nature of the medicine employed to produce that effect should be such as almost to assimilate it to the more common substances taken into the stomach. Thus, in lieu of your antibilious and analeptic pills, resorted to every night when in health, which increase, instead of obviating, constipation, impair the powers of digestion, affect the teeth and waste the body ; aperient mineral waters, natural or artificial, should be resorted to.

Q. Do you approve of that combination of saline ingredients, for daily use in cases of torpid bowels, which is known under the name of " Seidlitz powders ?"

A. They are a poor substitute for the pleasing and bland mineral water found at Seidlitz. I do not, however, disapprove of them in cases of heated stomach as well as constipated bowels. But the means which I have, of late years, learned to value more than any other, for obviating mere constipation, as the best, the quickest, the safest, and the cheapest, is the artificial mineral water prepared at the German Spa at Brighton, and known under the name of " Pullna Water." It is invaluable.

Q. What is your opinion respecting the practice, pursued by some, of losing blood, or taking aperient medicines during the spring and autumn?

A. Such a practice is now obsolete, and only retained in half-civilized countries. It would be highly absurd in England, now that so much care is paid to health daily and generally; but it was a wise and prudent practice in former ages, when people neglected their health all the year round, except on the two occasions alluded to in your question.

Q. May we not then, when in health, guard against an attack of disease during the general prevalence of some disorder, by taking medicine?

A. Most assuredly, if the prevailing disease is dependent on the disturbance of certain functions which the medicine so taken is calculated to preserve in tact; for in such cases the practice you allude to must be beneficial. Not so, however, in cases totally different; for then the taking of medicine, as a matter of course, may and will do harm, by weakening the powers of the constitution.

Q. Will the use of wine or distilled spirits, by

strengthening the system, render it less liable to disease, in sickly seasons or countries?

A. On the contrary, the daily use of either renders the system more susceptible to disease than when both are carefully abstained from.

Q. What, then, is the best course for those in health to pursue, in order to guard against disease under the circumstances referred to?

A. They should observe more strictly than ever temperance in eating and drinking; preserve the utmost cleanliness in their persons and clothing, as well as in and about their dwellings; use sufficient exercise in the open air; keep their minds as much as possible in a state of cheerfulness and free from terror; avoid exposure to the extreme heat of the day, dews and night-air; all undue fatigue, all chances of getting wet, all currents of air when the body is in a state of perspiration, and, lastly, they should adapt their clothing to the state and changes of the weather.

Q. When an individual is attacked with any disease what should he do?

A. Send at once for a regular and experienced physician.

Q. At what period of the disease is it best to apply to a physician ?

A. Immediately on the first attack of it.

Q. Why is this the most proper period ?

A. Because the disease may then be more effectually and promptly removed by an appropriate plan of treatment, and with less injury to the constitution, than in its more advanced stages ; and still more so, because there are disorders which are only to be cured at their onset, or first appearance.

Q. What kind of a room should be appropriated to the sick ?

A. A dry, lofty, and spacious room, as remote as possible from every species of noise, and one capable of being freely ventilated ; while at the same time the direct rays of the sun, or a draught of air upon the patient's bed can be effectually excluded.

Q. What ought to be the state of the air in the chambers of the sick ?

A. It should be perfectly pure, sweet, and dry.

Q. What injury results to a sick person from occupying a low, small, damp and confined chamber ?

A. The air of such chambers becomes quickly corrupted and unfit for respiration, and in this state tends to keep up, or augment, the disease under which the patient labours.

Q. May not the air of a sick room be vitiated from want of cleanliness?

A. Yes; hence it is all important to preserve the strictest cleanliness in and about the chambers of the sick, removing from them as quickly as possible, all foul linen and every species of dirt.

Q. Should a person during sickness lay upon a feather bed?

A. No; a bed of feathers is improper at all times, but more especially during sickness, and particularly so when the patients labour under fever.

Q. What bed do you recommend for the sick?

A. A mattress stuffed with horsehair, wool, moss, or dried sea-weed, or one of the modern hair mattresses.

Q. Have you had an opportunity of judging of the propriety of using the newly invented iron or steel spring mattresses?

A. Yes. I consider them injurious to health, if the patient or person in health lies immediately upon them, though he have a blanket

between him and such a mattress. I have known them to produce severe lumbago, rheumatism, pain in the spine and shoulders, and, in some instances, disorders of a nervous character, having peculiar symptoms. These objections may be done away with, and the luxury of such a contrivance as the one in question affords, enjoyed with impunity, by placing the steel spring mattress under another of horse hair.

Q. How ought the bed of a sick person to be placed ?

A. It should be at some distance from a cold or damp wall, and so placed, that the patient, while he enjoys all the benefits of a pure atmosphere, is guarded from any direct current of air, or from too great a degree of light. Care should also be taken, in the disposition of the bed, to allow of the patient's being approached on either side without inconvenience.

Q. Should the bed be drawn closely round with curtains ?

A. If the sick chamber be properly protected from draughts, the bed of the patient may, with more advantage, be left without any curtains.

Q. Is it proper for more than one person (for instance two children) labouring under disease to occupy the same bed ?

A. This practice, fortunately, seldom, if ever, obtains with us now, except in hospitals, and there only when they are crowded with patients. I need scarcely add that the practice is to be deprecated. Yet the poor and labouring classes in this country are too often compelled, as I have witnessed a thousand times, to keep two and even more children labouring under the same or even different disorders, in one bed, for want of others; and hence the difficulty of curing them and the reason of a greater mortality prevailing among them.

Q. Does the same objection apply to two or more patients occupying the same apartment?

A. Not so, provided the chamber be spacious and lofty. Indeed, in our large nurseries in the metropolis, it is a common practice to have two and more young patients safely housed therein, during the prevalence of the same disorder, or even with different diseases.

Q. Might a person in health be allowed to sleep in the same bed with one who is sick?

A. Constituted as society is, with its different links and connexions, it is a practice which cannot always be prevented; but generally speaking such a practice is to be

discouraged—the more so as it may, in many instances, do harm to the patient and bring injury to the healthy; when, therefore, it becomes necessary that a person in health should sleep in the same room with the sick, it should always be in a separate bed.

Q. Must the bed of a patient be shook up and made daily?

A. Excepting under particular circumstances, to be indicated by the physician or surgeon in attendance, a person who is sick ought daily to be taken out of bed, at a time when he is not in a perspiration, and the room is of a proper temperature, in order that the bed be shook up, well aired, and properly made.

Q. Should the bed-linen be frequently changed?

A. Yes. The great importance of perfect cleanliness in every thing relating to the sick, requires that the bedclothes and the body linen of the patient should be frequently changed; taking care that what is substituted be entirely dry and well aired.

Q. Is it proper to keep the heads of those labouring under disease warmly covered?

A. In general all covering should be

dispensed with, particularly in those affected with fever.

Q. Are visitors, or many persons to be admitted to the chamber of the sick ?

A. No ; their admission is on many accounts very improper : their presence and conversation disturb the patient, while the air becomes sooner tainted by their breath, and the exhalations from their bodies. Occasionally, however, and under proper restrictions, the admission of a relation or a friend of cheerful disposition will be of service to the patient.

Q. To talk much to, or in the hearing of patients seriously ill, I presume, must be improper ?

A. Most highly so. The sick should be disturbed as little as possible by talking : on the contrary, perfect quiet and silence should be the prevailing order of their apartments.

Q. Which is the best temperature of a sick chamber ?

A. During summer, the room occupied by a sick person should be kept cool, by proper ventilation ; in winter, however, the degree of temperature which should be preserved will

depend in some measure upon the nature of the disease under which the person labours. In febrile complaints sixty degrees—and in consumption or diseases of the chest, sixty-three degrees are the most preferable.

Q. When in winter a fire becomes necessary in a sick chamber, what important caution should be observed?

A. That the fire be regulated so as to preserve the room at an equable temperature throughout the day, not allowing it to be too warm at one period and too cold at another.

Q. Is it desirable to sprinkle perfumed or aromatic liquors over the room or bed of a sick person?

A. No. If the strictest attention to ventilation and cleanliness be found insufficient in preventing any unpleasant smell from occurring in a sick room, or in removing it when present, instead of perfumes we now use, fumigations of chlorine gas, or what is more handy, we sprinkle the room and bedclothes with liquid preparations of chlorine and lime, or soda and lime, which are powerful purifiers and disinfectants.

PART II.

DIVISION OF TIME. DIET.

CHAPTER I.

OCCUPATION OF THE FIRST HOURS OF THE
DAY.

Q. Having instructed me in all that relates to the various and important matters contained in the first division of your Catechism, what would you next direct my attention to?

A. With your leave I should wish you to frame your questions so, that I may be able to point out to you the manner in which the day ought to be spent under ordinary circumstances, in order to ensure the health of the body, and (so far as external causes are concerned) the tranquillity of the mind also.

Q. Still, even with these arrangements, there would remain untouched the comparative wholesomeness of the various articles of diet, proper for the preservation of health, respecting which you have only spoken generally.

A. These I should be able to consider more minutely than I deemed it necessary to do in the first division of my Catechism, by placing my remarks under the heads of the different Repasts which occur during the day, such as Breakfast, Dinner, Supper, &c.

Q. In order to secure a continuance of health, and the attainment of longevity, how soon should a person rise from his bed in the morning?

A. Soon after sunrise. From March to November, at least, no cause, save sickness, or one of equal weight, should retain us in bed a moment after the sun has risen.

Q. What injury do you apprehend from lying in bed an hour or two later in the morning?

A. Independently of the period best adapted to active exercise being consumed by such a practice, too much sleep has a tendency to render the mind dull, to weaken the body, to relax and depress the spirits, and otherwise to injure health by disposing the body to apoplexy, lethargy, and other complaints.

Q. What effect has early rising in promoting longevity?

A. A very beneficial one: very old persons

who have been examined in relation to the causes which have contributed to prolong their existence, have uniformly agreed in one particular, that they retired to bed early and rose with the sun. This is a circumstance attending longevity to which there has been no exception.

Q. Is early rising equally important in youth as it is in adult life ?

A. It is. When the practice of early rising is commenced in early youth, it is persevered in with greater ease in afterlife; while it more effectually displays its beneficial effects in promoting the development, symmetry, and health of the body, as well as the cheerfulness and serenity of the mind.

Q. What is first to be done immediately after rising ?

A. The head, face, neck, hands, arms, and chest should be thoroughly washed with pure spring water, and other parts of the body next. It is a most excellent practice to rub the chest with a towel dipped in vinegar and water.

Q. Of what temperature should the water be which is used for these purposes ?

A. During warm weather it should be cool, and warm in cold weather.

Q. After washing what should next be done?

A. Whenever a person has it in his power, and the weather is favourable, he should next partake of some active exercise, for at least an hour, in the open air.

Q. What is the kind of exercise which you consider most beneficial at this period of the day?

A. Walking or riding on horseback a few miles out of town and back again.

Q. Why is the morning the most favourable period for active exercise?

A. Because the body is perfectly refreshed by the repose of the night, the stomach is not engaged in the work of digestion, and the purity, and (during the summer season) the coolness of the early morning air, impart a greater degree of vigour to the constitution than is to be obtained, perhaps, at any other period of the day.

Q. When the inclemency of the weather will not permit of walking or riding in the open air, what should be done?

A. Some active exercise should be taken within doors, in a large and cool apartment. For many of these I refer you to what I stated in my general observations on exercise.

CHAPTER II.

MORNING REPAST, OR BREAKFAST.

Q. The morning exercise being finished, what is the next important circumstance to be attended to ?

A. The morning meal, or breakfast.

Q. Are there not persons, who from the nature and disposition of their constitution cannot go long without their morning repast after they rise, and still less to enter into any active exercise, or undertake any operation ?

A. There are so, particularly among delicate females. Such persons feel faint and sick if they do not immediately partake of some food after rising. Such is the uncomfortable state of their stomach, when empty at an early hour of the morning, that the mere act of brushing the teeth creates nausea. In all such cases it will be found that a rusk, a simple crust of bread, or a cup of warm milk and water or tea, will stay the uncomfortable

symptoms, and enable the person to go through the few preliminary morning occupations before breakfast.

Q. Could not the morning meal or breakfast be dispensed with without injury to the constitution ?

A. As a general rule it cannot. Early risers, and those who use a sufficiency of active exercise, experience a craving appetite which, if it be not satisfied, will lead to mischief.

Q. Of what may the breakfast consist ?

A. Of wholesome nourishing food ; observing, however, the all-important rules of simplicity in regard to the articles of which it is composed, and of moderation in partaking of them.

Q. Should solid or liquid food prevail at breakfast ?

A. At this meal the liquid should predominate over the solid part of the nourishment taken ; unless much active exercise or bodily fatigue has been gone through before it, or the appetite of the individual, being healthy, is considerable ; as is the case with the labouring classes of people, who need more solid than liquid food.

Q. You mean to say, therefore, that those who labour, or take much exercise in the open air, require a more substantial meal in the morning than others ?

A. In such persons the powers of digestion are in general very active, and the degree of exertion to which their constitution is exposed rendering a greater quantity of nourishment for their support necessary, they will require a more substantial breakfast than one of tea or coffee and bread.

Q. Of what then should their morning's repast be composed ?

A. In addition to bread and the usual fluids, they may partake in moderation of almost any kind of solid food in common use, plainly dressed : the best, however, will be a soft-boiled fresh egg or two, or a slice of the lean part of cold roast beef or mutton, or of cold boiled ham.

Q. What other observations has your experience enabled you to make on this subject ?

A. It is a curious fact, that the majority of people are inclined to abstemiousness from choice or disinclination for food, at this one particular meal. There are more people in

this country who are satisfied with one or two bits of toast or bread and butter, and a cup of tea, than there are who indulge in eating meat and other solid articles of food. This is a bad practice; for although their next meal (noonday) be more substantial, when we consider that from the dinner of the preceding day to the breakfast of the next, about fourteen or fifteen hours elapse, during which the stomach is left nearly empty, you will easily understand how injurious such a practice must prove to the constitution.

Q. What are the particular injuries which you have known to follow such a practice?

A. In young people I found their growth impeded, and the humours of their body vitiated. The natural appetite is ultimately impaired by long fasting. In grown-up people, particularly females and persons far advanced in life, it produces faintness, languor, dizziness, and much wind, from which arises that very unpleasant and provoking gurgling noise in the stomach and bowels, which has been called by the imitative name of *Bor-bor-ignus*.

Q. Are there no means adapted to such

persons, which would induce them to take more nourishment at their morning repast?

A. The first is to induce them to rise early, to eat a crust of bread, and immediately to enter upon some active occupation. The second is, to present to them at breakfast such articles as will entice them to eat. Of these grated hung beef and watercresses,—the yolk of two eggs beat up with milk,—grated stale bread made into a hasty pudding, forming a very pleasant sort of omelet to be eaten with salt,—broiled slices of bacon, prawns, and caviare dressed with olive oil and lemon,—a broiled slice of chicken,—the fleshy part of a Yarmouth herring,—a pilchard from Devonshire,—a slice or two of salame from Bologna or Parma—will be found to be most effectual persuaders to the delicate and the squeamish at their breakfast. To the robust and those of the middle classes, who take active exercise, no such temptations are necessary to make them eat heartily at this meal.

Q. Is coffee proper at breakfast?

A. The propriety of using coffee, to say the least of it, is very doubtful; if it be drunk, however, it should be weak, or taken with

plenty of milk and sugar, as the Italians and French do at their breakfast. The long use of large quantities of strong coffee, undiluted and unmixed, is doubtless injurious.

Q. What bad effects result from the excessive use of strong coffee?

A. The coats of the stomach become injured, digestion is impaired, and tremours and various other nervous symptoms are produced.

Q. To whom is strong coffee the most injurious?

A. To those who take little exercise, and to those of a weakly and delicate habit of body generally—subject to flushings and nervous feelings.

Q. Is it a proper article of diet for children?

A. By no means.

Q. Is chocolate more wholesome than coffee?

A. There are so many preparations included under the name of chocolate, that the question should have been more specific. If you allude to plain cocoa, burnt, powdered, and boiled in water, strained, cleared of all fatty or oily matter, and mixed with milk and properly sugared, nothing can be more nou-

rishing or more palatable; but if you allude to the highly compound chocolates of Mexico, Spain, and Genoa, sold in tablets, and prepared in a particular way, however excellent they may be to the taste, they cannot be recommended as innocent preparations for daily use at breakfast. Chocolate simply prepared is gently laxative, yet nourishing. This is the case also with the simple chocolate paste, which is used by pouring boiling water over it and adding milk. Compound chocolates on the other hand are heating and astringent.

Q. For whom is it improper ?

A. Chocolate is an improper article of food for the sedentary, and for those who have weak stomachs, as well as for individuals inclined to corpulency, or of full habits of body.

Q. What injury can result to such persons from its use ?

A. It is apt to cause, in the two first classes; oppression and uneasiness of the stomach, pain in the head and restlessness: for persons of the two last classes it is too nourishing and heating, increasing the corpulency in the

one case, and tending to produce fever, and other serious disturbances of the constitution in both.

Q. What are the necessary requisites of wholesome and nutritive bread to be eaten at breakfast?

A. That it be made of good flour, not too finely ground; that it be light and well baked, very crusty, and at least one day old.

Q. Which is the most wholesome, the home-made or bakers' bread?

A. Home-made bread, when properly prepared and thoroughly baked, is always more nutritious and easier of digestion, than the bread usually procured from bakers.

Q. Is new bread unwholesome?

A. New bread, particularly when eaten warm from the oven, is extremely indigestible: it is apt to oppress even the most healthy stomach, and in feeble, sedentary, and dyspeptic individuals, it will often produce violent pains, and other serious complaints.

Q. Can bread that has been toasted be injurious to the stomach?

A. No: with many stomachs it agrees better than that which is not toasted; but

then the toasted slices should be very thin and crisp; it should be eaten without butter, or the butter should not be spread on it until the toast is quite cold.

Q. What harm would result from eating hot toast and butter?

A. Upon coming in contact with the hot toast, the butter is converted into an oily fluid, almost indigestible, and next, in many weak stomachs, into a particular acid, which irritates that organ extremely. Hence hot toast and butter, even when taken in moderate quantities, have been known to produce heartburn, rancid eructations, nausea, headache, and other distressing symptoms.

Q. Is butter spread upon warm bread equally injurious?

A. Even more so than in the case before mentioned. I know of few articles of diet, at breakfast, which will sooner give rise to the train of symptoms just stated as hot buttered bread or rolls, crumpets or muffins, particularly in those of weakly and delicate habits.

Q. Is butter of itself an unwholesome article?

A. No: a moderate quantity of perfectly fresh butter spread on cold bread is rather

wholesome than otherwise; but then the quantity should be small. That thick phlegm of which so many complain, choking nearly their throats, and giving them an unpleasant habit of hawking, is principally due to the daily use of much butter.

A. Are you aware of any other more serious inconveniences which may be attributed to the use of butter?

A. It would be too long to detail the bad effects produced by the national fashion of eating butter at all times and meals in this country; but thus much I will say, that the predominance of long, tedious, and often severe bilious complaints, by which the English are distinguished above all other nations, is owing in a great measure to that fashion. As one of the many proofs of this fact, I may state that I have completely cured persons who had been long subject to bilious disorders, by prevailing upon them to abandon butter altogether.

Q. Do you draw no distinction of age, class and constitution of persons eating butter, or as to its mode of preparation, in this general condemnation of that article?

A. Were I to follow my own observations only I should say none. But I am aware that with children the smallest quantity of cold butter, spread on bread, has done no harm; that many of the more robust and healthy of the labouring classes, whose occupations are necessarily blended with exercise, have found in butter a pleasing food, and have not suffered greatly from it; and I am also aware that cold fresh butter is by no means so injurious as melted butter, salt butter, or fried butter; yet in speaking of the constant and copious use of butter, I would not be understood to make any distinction in my more general condemnation of that article.

Q. Are shortcakes an improper article of food?

A. Shortcakes, whether hot or cold, should be banished from our breakfast-tables as an unwholesome article of diet; there are few stomachs to which they do not prove peculiarly offensive.

Q. What are the least objectionable articles for breakfast?

A. Milk and its various simple prepara-

tions, or weak tea with well-baked bread one day old, and eaten with a small quantity of fresh butter. Besides these, there are sundry other articles of nourishment recommended as proper for this early repast, respecting which I have already spoken.

Q. It was at one time the fashion to eat brown bread for breakfast. The practice is not so general now; but it exists still. Can you explain to me on what principle it was recommended.

A. These recommendations generally originate with some good old dame of influence, who prevails on several of her friends to try the article she is fond of. The moment she has succeeded in getting a certain number of proselytes, she mentions the fact to her medical man. His authority is appealed to—he agrees it can do no harm, and his example is imitated by others of his profession, and thus the practice becomes generally established under the quoted sanction of the faculty. It is so with brown bread, it was so with mustard-seed sometime ago, it is so with broiled bacon at this moment. The effect of brown bread eaten at breakfast is to keep the

bowels soluble without the aid of medicine. It is a slippery article of diet for the stomach, and by its coarse texture scours the lining of the bowels. This is the whole secret.

Q. Could not the labouring classes and the poor substitute something cheaper, more wholesome and nutritious, than the *tea-wash* they drink ?

A. Unquestionably they might. Their health, their time, and their pocket would be better consulted were they to take a good basinful of hot broth and bread at breakfast, or thick oatmeal and milk, or a hasty pudding made of the flour of wheat, barley, or Indian corn, with the addition of some broiled bacon. As to the better classes of society, they would of course reject with scorn such suggestions, which, after all, might not be available in their case, considering how little exercise they take in the morning.

CHAPTER III.

NOONDAY REPAST, OR LUNCHEON.

Q. It is natural to suppose that those who have daily business or occupation would, immediately after breakfast and until dinner, attend to it. But what should those persons do who have no distinct occupation to command their time during that period?

A. The following plan will be found the most useful and agreeable. The conversation engaged in at breakfast might be prolonged for half an hour longer after that meal. How dearly some people like to linger and chat after breakfast! Each individual might then retire to his own indoor or domestic offices, to reading or writing, &c. This allows time for the stomach to digest the breakfast. Each should then take some bodily exercise in the open air, either by walking or riding, shooting, fishing, &c. On their return home, at one or two o'clock, the noonday repast or luncheon may be taken.

Q. If a substantial breakfast has been taken in the morning, is such a repast necessary?

A. It is totally unnecessary, if not injurious, when the breakfast has been substantial, and the dining-hour is an early one.

Q. If, however, the breakfast has been very light, and the dinner-hour is protracted until six or seven o'clock, would it be proper to remain until the latter period without food?

A. When sufficient exercise has been taken, and the appetite is keen, it would not be proper to wait so long; in such cases something ought to be eaten between breakfast and dinner; for nothing is so injurious to the stomach as to keep it many hours in a state of emptiness.

Q. What ought the repast to consist of?

A. Of almost any article of light food taken in very moderate quantities, in order not to interfere with the appetite for dinner.

Q. Will you mention some of them?

A. The simplest are a couple of biscuits, an orange, and half a glass of wine, or wine and water. For more robust stomachs, a little cold meat or chicken and a crust of bread with barley or toast and water. A

poached egg, or one boiled soft with two slices of toasted bread. A basin of vermicelli or macaroni broth. A dish of coffee with a thin slice of bread and butter, together with some other articles which it would be too long to enumerate.

Q. Is the practice pursued by many ladies, of taking, in the course of the morning, a glass of wine and a slice of pound or sponge-cake, in order to allay their appetite until dinner, a correct one?

A. It is one which ought not to be imitated: these species of cake can seldom be eaten without more or less injury.

Q. Should not some more exercise be taken before dinner?

A. The best time for an airing in a carriage, and for paying distant visits, is after luncheon. Such exercise will dispose the appetite to welcome the dinner without the whetting assistance of bitters or liqueurs which was, at one time, generally implored, in hopes of being able to eat a hearty dinner, but which has since been disregarded, to the great benefit of our constitutions.

CHAPTER IV.

DINNER.

Q. What should the dinner consist of?

A. Of any wholesome food that is in season, plainly dressed.

Q. Should the dinner be composed of many dishes?

A. The most wholesome dinner is that which consists of a single dish of meat, with a proper quantity of bread and vegetables.

Q. What injury is to be apprehended from a large number of dishes at dinner?

A. The principal injury is, that the appetite being artificially kept up by a variety of food, we too often feel disposed to take more of it than the stomach can digest; a grossness of habit in the one case, and all the evils of indigestion in the other, are consequently produced.

Q. Is it proper to commence the dinner, as some foreign nations do, with soup?

A. There are many individuals whose stomach is not in a fit state to digest solid food, if they partake of soup first. Hence among some continental nations soup is taken last.

Q. Is soup a wholesome dish generally speaking?

A. If not too rich or too highly seasoned, nor taken too warm, soup, with a due quantity of stale bread in it, is a food of which any one in health may partake with advantage.

Q. Why is it prudent to eat with it a quantity of bread?

A. Because in this manner it is rendered more easy of digestion, and capable of communicating a greater amount of nourishment to the system.

Q. To whom is soup an improper article of food?

A. Rich soups, and those which are highly seasoned, are improper for persons whose powers of digestion are weak, or who sit much within doors.

Q. Your observation, I presume, does not apply to the soup which the poorer classes have been recommended to take?

A. Decidedly not. Strong beef tea or mutton broth, with bread and vegetables, Scotch barley broth, veal broth thickened with flour and a due proportion of potato meal, are highly nutritious, easily digested by those who lead a laborious life, and will be found of sufficient support to the frame if a small quantity of the meat, which has served to make the broth, be added to them.

Q. There is one other general question respecting articles of diet at dinner which I would beg permission to put to you, and that is respecting cheese. As a general rule do you consider cheese a wholesome article or not?

A: I know that in giving a direct negative to that question I shall be met by the observation that thousands among the lower classes make one, if not two, daily meals of cheese without any apparent inconvenience; and I admit that an Englishman at supper, a Frenchman and an Italian at breakfast, may be seen daily feasting upon nothing but a large lump of cheese, with an equally voluminous lump of bread. But in these cases we have generally violent out-of-door exercise and bodily

fatigue to digest so heavy an article of food ; nor do the individuals, so indulging, all go free from inconvenience from such a practice, for a great many of them, in the long run, suffer from bilious and stomach complaints severely, from no other cause. Servants in this country, for instance, who eat cheese suppers, will come often under the care of the family apothecary, will be found to be heavy, dull, and late risers in the morning, and subject to headaches and pain at the stomach. As to more gentle stomachs, cheese is decidedly injurious ; many who partake of it at dinner cannot keep their eyes open immediately after.

Q. Is cheese when dressed or toasted less injurious than in its ordinary state ?

A. It is far more pernicious. Symptoms of a most violent character have been produced by partaking of it. I can anticipate a common and vulgar remark to all this doctrine against cheese, toasted or otherwise, as well as against certain other articles of food which I have condemned in these pages : that so many people can partake of them with impunity. This I admit, but what does it imply ? That some people, being stronger

than others, take a longer time to spoil or ruin their stomachs than the generality of people forming the more general rule do; but that the day of reckoning will come for them also at last, and that then they pay pretty dearly for their indulgence.

CHAPTER V.

ANIMAL FOOD.

Q. In what order should you place the various articles of animal diet, in reference to their digestibility and nourishing properties?

A. Thus: Beef, mutton, lamb, veal, pork, venison, hare, rabbit. And with regard to poultry, or birds, I class them in the following order: Fowl, guineahen, turkey, partridge, pheasant, woodcock, duck, goose, snipe, quail, pigeon, grouse, &c.

Q. What have you to observe with regard to beef?

A. To persons in health, beef, that is, the flesh of the ox, is a highly nourishing and wholesome food, when fresh, properly cooked, and not too fat; it is also very readily digested.

Q. Is the same true of mutton?

A. Yes: mutton, when neither too young nor too old, is equally as nourishing as beef,

and perhaps the most digestible of all animal food.

Q. Is the flesh of the lamb a wholesome food ?

A. It is when the animal has not been killed too young.

Q. Does veal constitute a food equal in quality to beef, mutton, or lamb ?

A. No ; it neither affords so much nourishment, nor is it so easily digested : when very young it is decidedly unwholesome.

Q. What is the character of pork as an article of food ?

A. To persons in health who lead an active and laborious life chiefly in the open air, pork affords a sufficiently wholesome nourishment ; but to those under different circumstances, it is less appropriate than either beef or mutton.

Q. Is it prudent to confine one's self entirely to the use of pork ?

A. The constant or long-continued use of pork is particularly improper for those who lead indolent or sedentary lives : it is apt to produce a gross habit of body, to disorder the stomach and bowels, and to occasion diseases of the skin.

Q. Does it produce the same effects on the laborious and active ?

A. With a proper addition of fresh vegetables, such persons may confine themselves to the use of pork for a considerable time without experiencing any ill effects from it.

Q. What is very generally to be observed of the flesh of young animals ?

A. That it is less nutritious and less easy of digestion, and consequently a less proper article of food than that of the same animals when full grown; because the fibrous part in which this nourishment consists is not fully developed.

Q. Should meat be eaten immediately after the animal has been killed ?

A. No: when the weather will permit of its being kept for some time after the animal has been killed, meat is rendered much more easy of digestion.

Q. Is meat of any kind, which has been so long kept as to become tainted, proper for food ?

A. Very serious injury will be apt to result from its use; yet there are articles of animal food, such as venison and wild birds

which the gourmands prefer when in a state of approaching putrefaction.

Q. Is fresh or salted meat most wholesome?

A. Fresh meat, as a general rule, is more wholesome, as well as more easy of digestion, and more nutritious than that which is salted. The latter when used exclusively is apt to produce scurvy and pimples.

Q. Does the preservation of meat by smoking and drying impair its nutritious properties?

A. It does in a very considerable degree: meat prepared in this manner is also rendered less easy of digestion; it acquires new and stimulating or heating properties, and is only fit for people who live in low, damp, and marshy districts.

Q. Is fat meat or lean the most wholesome?

A. Meat that is finely marbled with fat, which is always the case with the flesh of animals that have acquired their full growth, and have been properly fed, and allowed their natural exercise, is the most wholesome.

Q. What rank does poultry hold as an article of food after meat?

A. The flesh of the common fowl, and

turkey, among those which I have enumerated, affords very excellent nourishment, and is readily digested by most stomachs, when properly cooked:

Q. Is the flesh of the duck and goose as readily digested as that of the fowl and turkey?

A. The flesh of the two former is digested with difficulty, excepting by those who labour much or use constant exercise in the open air: hence an absurd practice has obtained of drinking pure spirits after them in order to assist their digestion. The flesh of the tame duck, though somewhat difficult of digestion, is esteemed a more wholesome food than that of the goose. Much of the objection urged against these birds, as articles of diet, might be obviated if their skin were invariably rejected.

Q. In what order do those birds, which rank under the head of game, afford nourishment to the constitution?

A. The partridge, pheasant, woodcock, snipe, pigeon, and grouse. When these birds are in season, and they are properly dressed, their flesh furnishes a very excellent

and savoury food, and one very readily digested.

Q. Is the flesh of the wild waterfowl an equally proper article of food ?

A. Generally speaking, it is heavy, coarse, and indigestible, unless those who eat them take active exercise.

Q. These precepts are referable to that class of animal aliments which you say are *fibrinous*, from the prevalence of fibre in them, over gelatine, and albumen ; but are there not *gelatinous* as well as *albuminous* articles of diet.

A. There are : among the first we reckon tripe, calves' feet, cow-heel, tendon of veal, &c. Among the latter, every species of fish that has found its way to the tables of the rich as well as the poor, eggs, the brain and liver of animals, and sweetbread.

Q. What general observations are you disposed to make on these two classes of aliments or articles of diet.

A. The gelatinous excite but gently the action of the stomach, and in the process of digestion cause but little heat ; hence their aptitude to assist in recovering the tone of weak

habits, and restoring animal strength, gradually, to those who have lost it after a long illness. They are very nourishing when properly digested, but in some cases, they require for that purpose the assistance of stimulants, such as pepper. They do not, however, increase muscular fibre, and those persons who habitually feed upon them have a pale complexion and a lax habit of body. The albuminous articles of diet, on the other hand, are the more rapidly digested the less dressed they are, they leave very little residue behind, are very nourishing, and seldom, if ever, overheat the stomach.

Q. Is fish, generally speaking, a wholesome food?

A. On this subject there is much difference of opinion; if the fish be salted or very fat, it is certainly injurious to those stomachs which are not possessed of very active powers of digestion, unless taken in very small quantities. If fresh and plainly cooked, it will be found to agree very well with many persons; but as a general rule, fish affords much less nourishment than the flesh of the birds or quadrupeds in common use.

Q. Does the lobster furnish an eligible kind of food ?

A. Some part of its flesh affords nourishment, without being very difficult of digestion : as it is generally prepared, however, and eaten, lobster may rank among the less wholesome articles of diet to be met with on our tables.

Q. What is your opinion of oysters as an article of food ?

A The soft part of oysters, when perfectly fresh, and eaten raw or slightly roasted in the shell, is a nutritious food, and of very easy digestion.

Q. Does the cooking of oysters impair their wholesomeness ?

A. Yes : oysters, when stewed or fried, become extremely indigestible, and altogether unfit for food. The albumen, in which their nourishing property resides, is rendered so compact by heat, that their digestibility is greatly destroyed. Eaten in any quantity, therefore, thus dressed, they have been known to produce symptoms of a very serious nature.

Q. What is the character of eggs as an aliment ?

A. Eggs, especially those of the common domestic fowls, and of the plover, when newly laid, and soft boiled, afford a very light and nutritive food.

Q. Am I to understand that they are not equally wholesome when hard-boiled or fried?

A. Certainly not; when thus dressed they are very difficult of digestion, and otherwise unwholesome.

Q. Can we consider gravies, meat jellies, and similar articles as a wholesome nourishment?

A. No; they are to be ranked among the least nourishing articles of a modern dinner-table: to weak stomachs they are peculiarly pernicious, and there is no greater error than that of recommending animal jelly to invalids, by way of accustoming them gradually to an animal diet.

Q. What is the best mode of dressing meat with a view to render it a wholesome and easily digested, as well as nutritious food?

A. These qualities are best imparted to fresh meat by roasting or broiling it, providing it be not over done, nor highly seasoned.

Q. Some persons are fond of the outer

crust of roasted, baked, or broiled meat: what say you to it?

A. That such parts of the meat are very apt to disagree with persons of delicate habits. During the process of slightly burning meat a peculiar principle is developed which is injurious to every stomach.

Q. Does the process of boiling render meat nutritious?

A. Meat, when properly boiled, is sufficiently soluble, and less stimulating to most stomachs than that which is either roasted or broiled; hence in some cases it is to be preferred; but it is also less easy of digestion and less nutritious. The process of boiling agrees best with salted provisions.

Q. What effect has stewing upon the salubrity and nutritive property of meat?

A. Stewed meat is not more nutritious than that which is boiled, and it is even less easily digested: food thus prepared is consequently improper for persons whose powers of digestion are weak; it may, however, be used occasionally by those in robust health and of active laborious habits, with a view of changing the diet from time to time.

Q. Is frying an objectionable mode of cooking?

A. It is without doubt the most objectionable.

Q. What renders it so objectionable?

A. The butter, oil, fat, or lard, which is employed in frying, is converted, by that process, into a substance almost totally indigestible, and highly irritating to the stomach, as I stated before in speaking of hot or fried butter.

CHAPTER VI.

VEGETABLE FOOD.

Q. Ought bread to form a proper addition to the other articles of food of which the dinner is composed?

A. Bread, or some other wholesome farinaceous matter should always constitute a part of this meal.

Q. What is the best substitute for bread at dinner?

A. Potatoes or rice.

Q. Is the potato a wholesome vegetable?

A. When mealy, simply boiled or roasted, and seasoned with a little salt, it is one of the most wholesome vegetables that can be placed upon the dinner-table.

Q. Is the wholesomeness of potatoes impaired by their being mashed or fried?

A. Mashed potatoes without the addition of butter, are unobjectionable; not so those which have been fried, for these are very

indigestible, and altogether unfit for delicate and sickly persons.

Q. In what manner should rice be prepared to be eaten with meat?

A. By simply boiling it, and by the addition of a small quantity of salt and cold butter.

Q. Are turnips a wholesome vegetable?

A. Turnips plain boiled are very wholesome, afford a bland cooling nutriment, and are easily digested.

Q. Are onions to be ranked among the articles of vegetable diet to be recommended?

A. When well boiled they are easy of digestion, and in moderation, they may be occasionally admitted as a seasoning to meat.

Q. Is cabbage a wholesome article of food?

A. Cabbage properly boiled, especially after it has been subjected to the frost, is a very wholesome vegetable for persons in health and who take much exercise in the open air. With the delicate and sedentary it is, however, very apt to disagree, producing flatulence, colic, and other uneasy symptoms.

Q. Is the same true of sour crout, or fermented cabbage?

A. Yes; it agrees very well with the active

and laborious, and as it will keep for a long time when properly prepared, it affords to them a very wholesome substitute for fresh vegetables, under circumstances where the latter cannot be procured; it should, however, be well boiled or stewed, without which sour-cROUT would be as indigestible as red and raw pickled cabbage.

Q. What are the dietetic properties of the parsnip and carrot?

A. The former, when well boiled, is a wholesome, nutritive, and diuretic vegetable, provided it be young and not woody; the latter, however, is more difficult of digestion, and less wholesome—I should say objectionable.

Q. What is the character of beans, peas, and similar pulse as articles of food?

A. Whether in their green or dried state, they afford but little nourishment, and are very indigestible, and flatulent; hence they should be carefully refrained from by all, excepting the strong and laborious: to those of weak stomachs they are particularly injurious.

Q. Are the green pods of the French or string beans equally unwholesome?

A. No : when well boiled, they are not difficult of digestion, and may be ranked among the most wholesome of our vegetables.

Q. Do salads, lettuce, celery, cresses, and similar vegetables which are generally eaten in their raw state, constitute a proper addition to the food taken at dinner?

A. Although these vegetables afford but little, if any, nourishment, and are not very easily digested, they are admissible in moderate quantity. Dressed simply with salt and a small quantity of pepper and vinegar, they seldom disagree with persons in health, active and fond of exercise ; but the weakly, the sedentary, and the dyspeptic had better avoid them. Salads dressed in the Italian fashion, with a profusion of oil, garlic, shalots, mustard, &c. may be delicious, but they are fire-brands to the stomach.

Q. Yet these vegetables, under certain circumstances, constitute a very important addition to animal food ?

A. Yes ; if a person is obliged to confine himself for any length of time to salted provisions, vegetable substances such as those

just enumerated, form a proper and wholesome article of food.

Q. Is the use of beet root objectionable?

A. No: when well boiled, eaten with or without vinegar, it is a very wholesome vegetable, not difficult of digestion, and affords considerable nutriment.

Q. Do you think as favourably of cucumbers?

A. By no means. Cucumbers yield but little nourishment, and are difficult of digestion; they should, therefore, be banished entirely from the table, unless previously salted.

Q. Does the same objection apply to them when pickled?

A. Much depends on the manner of pickling them. The Russians are very fond of eating large cucumbers which are salted in a peculiar manner, and they do not complain of any ill effects from their use; but if pickled with vinegar they will prove indigestible. Indeed pickles in general are indigestible, and afford no nourishment whatever to the body. The weakly and dyspeptic invariably suffer from their use.

Q. Should we eat our food very warm?

A. No; it should be eaten rather cool than hot; in this state it is more easily digested.

Q. Should the food be highly seasoned?

A. All seasoning used with food, excepting salt and a small quantity of pepper, is prejudicial to health.

Q. In what manner is it prejudicial?

A. Independently of its injuring the tone and digestive powers of the stomach, high seasoned food leads to excess in eating, heats the system, and, by creating an excessive thirst, inclines us to drink wine or spirits once too often.

Q. There are differences of opinion as to whether we should drink at dinner. What does your observation teach you?

A. That all general rules in this, as in every other question of diet, are not always to be relied upon. Unquestionably any large quantity of fluid drunk during dinner, will retard the digestion by producing distention or too hastily diluting the digested particles of the food; but this fact should not deter us from drinking moderately, if the food is of a dry nature and any degree of thirst exists.

Q. What is the best beverage at meals ?

A. Pure water. On this subject there ought to be no difference of opinion ; water is the only proper diluent for our food : from the use of any other liquid more or less injury must invariably result.

Q. Do you so fully object to wine then ?

A. No ; but I am confident that wine would have proved more beneficial to mankind had it always been viewed as a medical, instead of a dietetic agent.

Q. Is it most conducive to health to eat slowly, or very quickly ?

A. As perfect digestion, and of course the nutritious part derived from our food depends very much upon its being perfectly masticated, it should be eaten very slowly, in order that every portion of it be reduced to a fine pulp by the teeth previously to its passing into the stomach : persons who eat very fast, generally eat too much.

Q. We are often tempted to partake at the tables of the wealthy and luxurious of such articles of food as immediately follow the more substantial part of the dinner, such as pies, pastry of all kinds, creams, custards,

jellies, puddings, honey, &c. I should therefore like to be directed by your advice in the choice of them.

A. My advice to you then, would be to choose *none*. But if any must be accepted—a plain light pudding made of bread, rice, or flour, with the addition of milk, eggs, and sugar, is the least objectionable, provided you have not already partaken of a full repast. Save me above all things from a downright English plum pudding. Good, but mischievous.

Q. Are pies injurious, and pastry of every description?

A. They are objectionable in ninety cases out of a hundred; but the most injurious to stomachs are your minced pies, and all those, whether under the name of tarts or otherwise, in the part of which the cook has profusely dealt out butter to exhibit her skill in forming an almost aerial crust.

Q. Do you equally object to fruit pies or tarts?

A. Baked or stewed fruit with the addition of sugar, is by no means unwholesome, except to those persons whose weak stomachs would allow such compounds to run into fer-

mentation. It should also be eaten with bread, and not with the buttered crust with which it is baked—and must be taken in moderation. Your roly-polly puddings consisting of layers of heavy paste rolled up, between the folds of which, jams and jellies are introduced, are fatal to weak stomachs. Yet how often have I seen children treated with them!

Q. Are custards injurious?

A. Light custards made principally of the yolks of eggs, milk, and sugar, are not injurious; on the contrary, they afford to most persons a light and nutritious food.

Q. We are sometimes led to taste of some delightful honeycomb, looking inviting from under its crystal cover. What risk do we run in so doing?

A. Honey is a never-failing disturber of the stomach or bowels. To some it is positively a poison. Those who in the least suffer from disease of the digestive organs should never touch it. On the other hand, a few persons in health, with whose happy stomachs nothing disagrees, may venture upon honey, provided they eat it with bread and in moderation. With them it is said to be easily digested and perfectly inoffensive.

CHAPTER VII.

DESSERT.

Q. What is meant by dessert ?

A. An unnecessary display of twenty dishes of fruit, cakes, biscuits, and preserves, symmetrically arranged on a polished mahogany table, or on one covered with a damask cloth, after a profuse dinner.

Q. This description pretty well gives me to understand that you object to such a part of the dinner, and probably to the articles of which it consists ?

A. I do so to a great degree. The pernicious effects produced by many of the articles of which a dessert is generally composed, on a stomach already satiated with a copious dinner, are incalculable. Fortunately, the poorer classes of society are free from such effects, for want of means of buying mischief. Almost every article of dessert, with the exception, perhaps, of some very ripe fruit, inter-

feres with the proper digestion of the food previously eaten.

Q. Are fruits in general, then, objectionable?

A. No : if eaten at a proper period of the day, and in moderation. Care must be taken, however, that they be perfectly ripe and fresh. They may then be considered wholesome, and they afford a bland saccharine pulp.

Q. What are the fruits which come under this description?

A. The peach, different varieties of the pear, and apple, oranges, and grapes.

Q. Can we render these more wholesome?

A. Yes : by rejecting the skin, or external covering, and the seeds; and by partaking of them only in the fore part of the day, or early in the evening, when the stomach is not actively engaged in the digestion of food already eaten.

Q. What other fruits may be eaten in moderation without injurious effects?

A. Strawberries, raspberries, gooseberries, and the red or white currants, when fully ripe. To the former, however, there are objections. The cottony core of a strawberry

proves sometimes highly indigestible, and injurious, particularly to children.

Q. Are not cherries and plums to be considered as wholesome fruits?

A. They are more difficult of digestion than those already enumerated, and, particularly when acid, very generally disagree with the stomach: the sweeter kinds, however, may be eaten in moderation, by strong and active persons, without injury, provided the skin and stones be carefully rejected, and the fruit be fully ripe.

Q. Is the pine apple a wholesome fruit?

A. It should be eaten only by those whose stomachs are in perfect health, and by such very sparingly. There is a peculiar acid in this fruit which few can bear with impunity. The pulp, too, is not easily disposed of in the stomach.

Q. Should we consider those fruits which are imported in a dried state injurious to the stomach, such as raisins, figs, and prunes?

A. They would be very nutritious and innocent to those in health, particularly if eaten with bread, and not in excess: could we but recollect to reject the tough skin and pips as

well as stones. In eating dry raisins, however, we often neglect to do that, and hence their indigestibility.

Q. What is the character of melons, as articles of food?

A. The pulp of the water melon being extremely indigestible, renders this fruit a very unwholesome and dangerous article of food.

Q. Are apples, peaches, and cherries less wholesome when dried than in their recent state?

A. They are more difficult of digestion than when fresh, but if stewed with sugar, they are sufficiently wholesome, excepting for weak stomachs, in which they are very liable to run into fermentation, and to produce acidity.

Q. What should we think of preserves as a part of our diet?

A. That if they be made of tolerably ripe fruit, and not too acid, a moderate use of them is admissible.

Q. Should they be eaten without any addition?

A. They agree better with all stomachs, and are more readily digested, when eaten with bread or hard biscuits.

Q. I almost fear to ask your opinion about *trifles*.

A. I should answer you most *seriously* that they are the most incendiary articles in the dessert.

Q. And sponge cakes ; what of them ?

A. Better looked at, than eaten.

Q. Favour me with your experience respecting nuts ?

A. That few articles are more injurious to health, particularly to individuals whose digestion is slow and imperfect.

Q. What injury results from their use ?

A. Even in small quantities they are liable to oppress the stomach, produce difficulty of breathing, colicky pains, and disorders of the bowels : death itself has followed their immoderate use in delicate persons.

Q. Is the chestnut, when boiled or roasted, equally unwholesome as in its raw state.

A. No : it is still, however, difficult of digestion, and very windy, and should be eaten only by the robust and healthy.

Q. As nuts and the kernels of nuts are very tempting, and those in health can scarcely be expected to forbear eating them, are there any

precautions by which we could guard against their injurious effects ?

A. Yes : avoid eating them late in the evening, when the stomach is loaded with other food, or when they are in the least degree rancid : never partake of more than a very small quantity of them at a time, and always eat them with salt and bread or biscuits.

CHAPTER VIII.

LIQUORS.

Q. It is the custom with us to partake of wine or ardent spirits after dinner—can that be considered a wholesome practice?

A. I have already observed, that ardent spirits, whenever taken, are injurious to health; drunk after dinner they prevent the proper digestion of the food, excite fever, disturb the circulation, render the individual less fit than he otherwise would be for the duties of the after part of the day, while, too often, in this manner, habits of intemperance are insensibly formed.

Q. Are all kinds of liquors to be classed under one and the same observation; namely, that they are all equally injurious to the constitution?

A. It would be an error to do so; for not only are some liquors different from others, to a very considerable degree, in their compo-

sition, but their effects on the constitution vary materially. The simplest division of artificial or prepared liquors, such as I allude to, is that of purely fermented liquors, and fermented-distilled liquors.

Q. Is the immediate, as well as the more remote effect produced on our constitution, by each of these classes of liquors different?

A. Just so. Bearing always in mind that I speak of moderate quantities only, I should say that the immediate and remote effects of the liquors of the first class are to assist digestion without irritating the stomach, to carry additional nourishment to the constitution, and to produce an equable, general, and subdued exhilaration, arising from a consciousness of being at ease.

Q. What then would be the effects of the liquors of the second class on our system?

A. In these the alcohol or spirit being much more concentrated and undiluted, we have for their effects on the constitution great irritation and over excitement of the lining of the mouth, throat, and stomach; exaltation and disturbance of the circulation; tumultuous

action of the heart; embarrassment of the head; heat, fever, a general caustic feeling all over the body; a local, instead of a more universal sensation of pleasure, and that too of short duration, followed by corresponding depression and languor.

Q. If such be really the physical effects of spirituous or alcoholic liquors undiluted, although drunk in moderate quantities, I can easily conceive what must be the result of a repeated and immoderate use of such preparations, and I marvel no longer at your uncompromising hostility against them?

A. Such is the state of deterioration and suffering produced in the human body by the protracted and daily use of spirituous liquors, that were it possible to establish an infirmary for those patients alone who have fallen victims to the disgraceful habit of alcoholic intoxication,—and young people could, in the course of their education, be paraded two or three times through its wards; the moralist, the philosopher, the clergyman, and the physician, would need no other argument to enforce abstemiousness from all such beverages, and to prevent the contraction of so pernicious

and fatal a practice, than to point their finger to the miserable and wretched objects, inhabitants of these chambers of death. In the HEAD, stupefaction, dizziness, noises in the ear, dimness of sight, pain, and delirium. In the STOMACH, irritation, inflammation, ulceration, vomiting, and acute pain and anguish. In the LIVER and BOWELS, heat, a burning sensation, enlargement, induration, acute sufferings, cholic, cholera, inflammation, and gangrene. Such are the leading effects of the constant use of alcoholic distilled liquors on the human frame, which would present themselves to the scared youngster in his perambulations through that abode of misery.

Q. How well our great poet-painter of nature, and dramatist, must have been aware of this, when he exclaimed,

Though I look old, yet I am strong and lusty,
For in my youth I never did apply
Hot and rebellious liquors to my blood.

A. No writer of this, or of any other nation ever displayed a more intimate acquaintance with the virtues and vices of society; or a better knowledge of the heart and mind of

man. No wonder, therefore, that the dire effects of *hard drinking* on the human constitution should have been noticed by him, and so beautifully expressed.

Q. You have already admitted, in another part of our colloquies, that, although, mankind would have been happier and more healthy had they never known wine; yet, constituted as society is, and with the modern views of medical and dietetic treatment, wine is at times admissible.

A. It is so; and my opinion is founded on the knowledge of this fact, that independently of the alcohol which wine contains, each individual species of wine has its peculiar effect on the constitution, owing to the presence of other principles, which are due to the fruit from whence the wine is derived.

Q. In that case we are not to be directed in our choice by the quantity of spirit said to be held in solution in different sorts of wine; and the result of the experiments made by those chemists who have analyzed wines, although scientifically interesting, cannot form a guide to the dieterian or the physician?

A. You are quite correct in your con-

clusions: for that there are wines which, though stated to contain more spirit than others, nevertheless produce less of excitement and irritation, are facts quite notorious. Either, therefore, the tabular results of chemists are wrong; or, independently of the action of alcohol which they contain, wines exert some other influence on the constitution. Neumann states that Burgundy wine contains less alcohol than claret; yet who ignores that the former is much more heating and exciting than the latter? Brande ascribes more spirit to common Burgundy wine than to hermitage and *côte rôtie*; yet the two latter are considered, and I think justly, in the country in which they are mostly drunk, as possessing, by far, much stronger stimulating properties, and being more *heady*.

Q. Is red or white wine the least exciting?

A. In the same species of wines, taking them perfectly unadulterated, the red are less exciting than the white wines; but the latter are more readily digested.

Q. Which of the white wines is preferable?

A. In winter Sherry; in summer Chably.

Q. What say you of Champagne?

A. Rapidly but superficially exciting; particularly that sort of it which is sparkling. A saline draught with a tea-spoonful of eau de Cologne or of spirit of wine would produce nearly the same effect on the constitution, without being so pleasant. With both, the effect would be instantaneous and evanescent. Much of the exhilarating quality in sparkling Champagne is due to the fixed air it contains; for in the strongest Champagne there is very little more of alcohol than in some of the Rhenish wines; and it is well known that these are not equally intoxicating.

Q. To whom is the practice of drinking wine after dinner particularly injurious?

A. To young persons, and to those of robust and full habits.

Q. When children and young persons are of a weakly and delicate constitution, or are convalescent from a long illness, will not a glass of wine after dinner increase their powers of digestion, and tend to invigorate their systems generally?

A. Some wines will do so unquestionably, such as Bordeaux and port wine, given in very small quantities at a time. But the best

mode by which the constitution is to be strengthened in these cases, is not by the use of wine, but by pure air, active exercise, early rising, and a sufficiency of wholesome nourishing food, plainly cooked.*

Q. Does every objection urged by you against wine in general, apply equally to sweet wines?

A. Not so. Sweet wines such as Frontignan, and Lunel, contain a nutritive principle which common wines have not, and less spirit. They lodge in the stomach longer, and waken with difficulty its energies. They are, therefore, unsuited to languid and slow stomachs, they are apt to produce acid, and when drunk to the excess of intoxication they are generally followed by indigestion.

Q. Are the Tokay, the Rota, and the Malaga wines to be placed in the same category?

A. Not at all. These are syrupy wines, the fruit of which contains just half the alco-

* In the course of a close attendance at the infirmary for sick children for the space of ten years, during which time I treated upwards of ten thousand young patients, I seldom met with a case of convalescence from disease among the poor that did not recover quite with the above means, without the additional use of wine.

hol of the last. All of them have a honey-like taste, the Tokay more particularly. Their sensible qualities render them proper and well calculated for the stomachs of old people which are languid and yet can bear but little excitement.

Q. Is a glass or two of pure wine diluted with water, preferable to either ardent spirits or malt liquor?

A. Decidedly so. If water alone be inadmissible or disliked.

Q. You have already stated your opinion regarding the use of malt liquors, in speaking of the different kinds of drinks proper for the table. Do you consider that they assist digestion?

A. I think not. The narcotic principle which they contain (hops) would be sufficient, in my opinion, to retard, rather than promote digestion.

Q. Still you must admit that when genuine and not too strong, inasmuch as they hold in solution a large quantity of malt, they cannot fail to be nourishing, and if so, to be useful in cases of weak and irritable stomachs, in which nourishing and sedative effects are desired?

A. With regard to genuine and mild ales, and the weakest kind of home-brewed beer or porter, all this may be true; and I have often availed myself of that fact to order some of the patients a small quantity of those liquors with success.

Q. Are there any particular classes of persons, to whom malt liquors at dinner would be hurtful?

A. Yes; to those of full apoplectic habits; to those who are troubled with frequent headach; to the sedentary, the gouty, and the dyspeptic.

Q. Is any injury to be apprehended from spruce beer, ginger beer, and soda water, drunk at dinner?

A. The quantity of fixed air which these fluids contain, by unduly distending the stomach, interferes with and impedes the action of the digestive powers of that organ; hence it is improper to make use of them shortly before, during, or immediately after a meal.

Q. There is another class of liquor respecting which I should like to hear your opinion; I mean the so-called cordials, of which most people, the ladies included, are apt to

partake either at the dessert, or with their coffee?

A. I have already told you that cordials are highly injurious to the stomach, and to health generally. A more pernicious drink than the cordials generally made use of in this country, could scarcely be invented: they are merely ardent spirits disguised with sugar and some spice.

Q. Do not some contain even more deleterious ingredients?

A. Yes: noyau cordial, for example, contains a minute portion of a very active poison. Immediate death has, in some instances, resulted from drinking a small glass of it.

CHAPTER X.

AFTERNOON.

Q. Should active exercise be taken immediately after dinner?

A. Not when it can be avoided. Resting for at least a couple of hours after this meal is proper, in order not to interrupt the process of digestion. When the dinner has been very light, and during the summer, a gentle walk is frequently of service.

Q. How should this period in general be spent?

A. By the man of leisure in conversation, or in the perusal of such works as do not require very close application, or any great exertion of the mind.

Y. Is the practice of sleeping for an hour after dinner a good one?

A. No: it is one which should be avoided by all, excepting, perhaps, the aged.

Q. To whom is it most injurious ?

A. To the young and healthy, and to those of gross and full habits of body.

Q. What harm results to such individuals from the practice of napping ?

A. It tends to produce an undue accumulation of fat, to cause headach, particularly when the ordinary clothing and cravat are not removed, and, in the predisposed, to induce apoplexy. From a nap after dinner, the individual always rises with a feeling of languor rather than of refreshment.

Q. Is an afternoon nap particularly injurious to the labourer in the field ?

A. A labourer, or any individual engaged in active and fatiguing occupations, should rest after the principal repast of the day ; but the former ought to take care not to fall asleep on the damp grass, or be exposed to the direct rays of the sun in a hot summer's day ; for he will generally contract some serious disorder by doing either, such as rheumatism, cold, and some more important complaint of the head.

Q. What persons are most apt to experience a strong inclination to sleep after dinner ?

A. Those who indulge to excess in the

pleasures of the table ; particularly those who at dinner drink freely of wine, or malt liquors, and eat considerably beyond their natural appetite.

Q. By what token can one recognise the man who has partaken of food in moderation, and drank either water alone, or sparingly of wine and water.

A. He will rise from table with a feeling of lightness and of cheerfulness unknown to the intemperate or the glutton.

Q. In what manner should the afternoon of a long summer's day be spent after dinner ?

A. Persons who have business to attend to will, of course, return to it ; those, however, who have it in their power, will find it to their advantage in the after part of the day to spend two or more hours in exercise in the open air, provided the weather be favourable.

Q. Should the exercise of the afternoon be as active as that of the morning ?

A. The morning is best adapted for the more athletic exercises ; while walking or riding is more calculated for the afternoon, especially in summer.

Q. Is not some degree of exercise in the

open air towards the close of the day important to the mechanic?

A. Yes. Especially to those whose occupations are carried on within doors, or in a sedentary posture. A walk for an hour towards evening is an important means of preserving the health of such individuals.

Q. Referring once more to the practice of sleeping after dinner, you will permit me to observe, that your doctrine on that subject seems at variance with the practice of several nations, who indulge in a *siesta* after the principal meal?

A. And why so? Because their climate being very warm, and the air, heated by a glaring sunshine, being sultry and oppressive, immediately after the dinner, which is generally taken shortly after midday, the inhabitants withdraw themselves from the influence of that air out of doors, by devoting an hour or two to sleep, which they rob from the night; for all such persons sit up very late in summer. I ought also to add, that if these nations nap after dinner, it is by regularly going to bed, and not by nodding at the dinner-table.

CHAPTER XI.

TEA-TIME.

Q. The English, the Americans, and, of late, some of the continental nations in Europe, have added another repast to the three most commonly in use, which is distinguished by the name of the article principally used at that repast. What is your opinion of the custom, and of the qualities of the article alluded to, namely, tea?

A. It would be useless to stand up against a national custom, which has been sanctioned by ages. Yet I have no hesitation in saying that to those persons who dine late, such a custom is one of superfluity, and of injury to their stomachs. The case is different with people who partake of an early dinner.

Q. Then I am to understand that you object to the custom of making a meal of tea, but not to the tea itself?

A. I have also objections to the tea itself,

as an article of diet. I think that whether it be of one sort or another, it will be found by impartial people to be any thing but conducive to health, particularly if drunk strong and in a large quantity.

Q. What injury results to the constitution from the immoderate use of strong tea?

A. Strong tea impairs the powers of the stomach, produces various nervous symptoms, palpitations of the heart, restlessness, head-ach, heartburn, and all the usual train of morbid feelings which accompany dyspepsia, or morbid digestion.

Q. To whom is the moderate use of strong tea the most injurious?

A. To children, to delicate females, or persons in infirm health, and to those who lead a sedentary life, or use but little exercise.

Q. What kinds of tea are the most prejudicial?

A. The green teas; for a reason which I before stated. These, particularly when drunk in strong infusion, are very generally confessed to have a pernicious effect upon the stomach, bowels, and nervous system generally.

Q. When a weak infusion of black tea is

used in moderation is it liable to the same objections?

A. No: particularly when drunk moderately warm, and with a sufficient quantity of milk and sugar; in that case, the beverage may be refreshing, and free from inconvenience?

Q. Is cream a proper addition to tea?

A. No; very injurious.

Q. Is bread a proper article to be eaten with tea?

A. Yes: a moderate quantity of good bread and butter should always be taken with the tea.

A. Are tea-cakes, usually eaten at this meal, a wholesome food?

A. As a general rule they are not; particularly when eaten in the evening, and by persons of delicate habits, unaccustomed to active exercise.

Q. Is there any important objection to the cakes denominated muffins?

A. The muffins in general use at tea are composed of an imperfectly-baked dough, which, being eaten hot, with butter, is not only indigestible, but lies heavy for some time

at the pit of the stomach, producing oily rising in the throat, and otherwise very seriously disturbing the constitution.

Q. Is coffee a more appropriate fluid for the evening meal than tea ?

A. The same objections apply to it as to strong tea ; with many persons, taken in the evening, it prevents sleep, or disturbs it.

Q. Is weak tea and bread the most appropriate articles for the evening meal of the labouring classes ?

No : for those who take much bodily exercise in the open air, milk and bread, porridge, thick gruel, or rice-milk, will furnish a much more wholesome evening repast than either tea or coffee.

CHAPTER XII.

EVENING.

Q. Persons who take active exercise during the day, and having dined early, have also partaken of their tea-repast at an early hour, will have several hours of leisure before they retire to rest. In what manner should they occupy themselves during that period ?

A. In the summer a short walk in the cool of the evening with part of the family, a visit to an intimate friend or relation, and domestic duties afterwards, in addition to some light and instructive reading will fill up the time ; while during the winter season the same period of time should be devoted—first, to our family, by studying its comforts, character, and inclinations, by becoming truly domesticated and familiarized with them, giving them, or taking from them useful instruction in moral, religious, or human knowledge—secondly, to our own improvement, by adding to what we already know, or

by learning something else of which we are ignorant. We may also employ ourselves in writing, in reading, either privately or aloud, to others, in playing on some musical instrument, and otherwise engaging our own or the attention of those with whom we live, until bed-time.

Q. What no more drinking, no more eating? No wine and water and a sandwich? No cakes, no little sweetmeats, no little relish of any description? No supper?

A. All these are the contrivances of the idle, the intemperate, and the glutton. Rely upon it that neither the person of independence who has partaken of such a breakfast as I have described, at nine o'clock in the morning—of a noonday meal or luncheon at two o'clock—of a good dinner at six or seven o'clock—and of his tea with accompaniments at ten in the evening: nor the individual daily engaged in business or in laborious duties, who eats a hearty and wholesome morning meal at eight o'clock—a substantial yet salubrious dinner at one o'clock—and with his tea at seven or eight o'clock in the evening, eats the articles of solid food which I mentioned to you (and both retire to rest as they

should do, the one at ten o'clock, the other at twelve) requires any other refreshment of any sort if his object be to keep in health.

Q. I am to understand, therefore, that you condemn suppers altogether?

A. I unquestionably do as extremely detrimental to health. I have been physician to three charitable institutions for twelve years in the metropolis, and given advice gratis in the morning, at my own house, for the same number of years; during which time I must necessarily have come in contact with thousands of the middle, laborious, and even lower classes. I have frequently visited their abodes, and made myself thoroughly master of their habits and modes of living, and I have no hesitation in saying that diseases of the stomach, liver, &c., both in the parents and in the children, were only to be met with among those, who, after the regular and successive meals of the day, had indulged likewise in eating suppers. These suppers generally brought with them liquors, and liquors ill health. Wherever I prevailed in persuading the individuals labouring under chronic infirmities of the stomach to omit their suppers of

cold pork, dried herring, or cheese, I succeeded in restoring them permanently to health and to their occupations.

Q. In what manner do suppers injure the health?

A. First, because they add an excess of food to the stomach while it is in a condition the least fit for digestion, there being already enough in it to engage its attention comfortably. Secondly, because they disturb sleep, calling forth uneasy dreams, and the nightmare; and thirdly, because they are apt to occasion apoplexy, and other serious diseases. Of a considerable number of public and private patients, particularly among the tradesmen and people of business in the immediate neighbourhood of my residence, to whom I have been called in haste at night, a large majority had been attacked with apoplexy, or bowel complaint, and vomiting, on waking suddenly out of their sleep, in consequence of having partaken of a hearty supper.

Q. Is there no case, then, in which suppers could be allowed?

A. The only cases in which suppers are admissible are, first, when an individual in health

has, from some cause or another, been obliged to fast for many hours ; and secondly, whenever the fashion of society has called together for a great many hours in the night, a congregation of strong and gay healthy individuals, whose digestion of the previous meals of the day has been hastened by the violent exercise of dancing.

Q. Are there any precautions which we should take even in those cases ?

A. Without doubt, else the worst of consequences may be anticipated. The food should be not only plain, but of the lightest kind. No variety, and still less any motley mixture of articles of food or luxury should be allowed. Very little drink should be taken with such a repast, and one if not two hours, at least, should be suffered to elapse between the period of eating it and that of retiring to bed.

Q. I take it for granted that late suppers must be considered as pernicious to the health of children ?

A. They are so in the highest degree. The last meal of children should always be about the close of the day ; soon after which they

should retire to bed, and not be allowed to eat, as a general rule, until the next morning.

Q. Whenever any of the alarming ill effects of eating a hearty supper, such as you have described, occur in the middle of the night, what should be done before medical assistance can be obtained?

A. An emetic is the best, the readiest, and the most effectual mode of relieving the stomach, until the arrival of the medical attendant. Mustard and water, a dessert-spoonful of common salt, dissolved in water, even the tickling of a feather put down the throat, are proper and handy means, and will afford the necessary relief in most cases.

CHAPTER XIII.

NIGHT.

Q. What is the proper period for retiring to rest ?

A. As a general rule, I should answer the question by saying, "Early at night." But this is a relative word, which may imply a very different hour of the night with different individuals, having due regard to their age and state of health, their occupation, and station in life, and to the season of the year.

Q. You mean that a certain number of hours of rest are necessary to every individual, whether that individual retire to bed at ten, eleven, or twelve o'clock in the night, according to his inclination and business ?

A. Just so. Nothing has a more prejudicial effect upon health than the want of sufficient sleep during the night; hence retiring to bed early (and, as a necessary consequence,

to rise early also) is a practice which cannot be too strongly inculcated. We have only to consider what happens to our children in this respect, in illustration of this maxim. They are put to bed early, and they rise with the lark; and what are the consequences? Look at their rosy cheeks—see them gamboling about the rooms as happy as doves—contemplate them eating their early breakfast with an enviable relish—and you will then know the advantages of early retiring to bed and early rising.

Q. In the present state of society what may be considered a proper hour for retiring to rest?

A. To persons of independent fortune, midnight; to those engaged in active business during the day, ten or eleven o'clock; to artificers, workmen, and labourers, nine o'clock are the hours I should recommend. We shall then have the hours of rising in the following order. For the last mentioned class of people, six o'clock; for the second, seven; and for the first, eight o'clock in the morning. From which you will see, that those engaged in business would have nine, and the idle only eight hours of sleep.

Q. Should no difference be made in summer?

A. Generally speaking, people put off, as a matter of course, the time of retiring to bed an hour later at this season of the year.

Q. Are we to consider, then, that from eight to nine hours of sleep, upon an average, are sufficient for an adult?

A. They are fully adequate to all the wants of the system. Some persons, indeed, thrive best upon a much shorter period of sleep.

Q. Which class of persons require the greatest quantity of sleep, those who spend their days in sedentary employments, without much application of the mind; or those who labour hard, or use active exercise in the open air?

A. The latter, truly. A labourer has need of a sufficient quantity of sound sleep at night, to renovate fully the system from the exhaustion produced by the active exertions of the preceding day.

Q. What class of persons thrive best on a less quantity of sleep?

A. Persons inclined to be excessively corpulent, or of a full habit of body; all such should rise early, and spend more time in exercise out of doors.

Q. Do not those persons injure their health who habitually delay going to bed until after midnight?

A. They do so in a very great degree: and being obliged to pass in sleep a portion of the ensuing morning, the advantages of early rising are lost for them. I may also add, that as the period of the night best adapted for refreshing repose, according to the oldest and most accurate observers, is the period of two or three hours before midnight, those individuals who habitually delay going to bed until after midnight wilfully deprive themselves of that advantage.

Q. In such a case, the practice of applying to study at night, and that of frequenting routs and assemblies, which lead to late hours, must be looked upon as pernicious to health, according to your doctrine?

A. There cannot be the least doubt on such points. To those who live a perfectly temperate life, the occupying a few of the early hours of the evening in study, will occasion little or no inconvenience. Neither will the individual materially suffer who nightly attends early evening parties, never crowded, and

never late. But to sit up, habitually engaged in study, until a lengthened period beyond midnight, or to mix often in the week in suffocating rooms, with impacted crowds of people, until some hours after midnight, is to undermine one's health, perhaps irretrievably.

Q. Is not night the period best adapted for study?

A. Intellectually speaking, I should say yes; but viewing the question medically, I am bound to say, no. The morning is the portion of the day best adapted for study.

Q. How is health injured when the mind is intensely engaged in study, or other occupations, until a late period of the night?

A. Because intense mental application exhausts the body, gives rise to nervous feelings and restlessness, and occasions our subsequent sleep to be disturbed and unrefreshing.

Q. Is there any other inconvenience which may fairly be ascribed to this practice?

A. Yes. The artificial light of lamps or candles, which is necessarily used by those engaged in reading or writing long at nights, and the reflection of the white paper, produce

injurious effects on the eyes. They become red and inflamed, and the power of vision is often materially impaired.

Q. For the same reason, I presume, you would condemn the practice of reading in bed?

A. Decidedly. It is highly pernicious, besides being full of danger; it strains the eyes, induces us to delay too long the hour of sleep, and it otherwise injures our health.

Q. How can any harm result to health, from frequenting large and crowded assemblies late at night?

A. You will admit that in apartments in which a large number of persons are collected together, and which are lighted by a variety of contrivances, such as lamps, wax-candles, chandeliers, girandoles, &c., besides fires to warm them in the winter, the air must, of necessity, be very impure after a time, and the atmosphere overheated. To the ill effects, then, of both these iniquities, are we exposed when we frequent assemblies, and these effects, I need not add, are destructive of health.

Q. What other objection can you urge against such assemblies?

A. Another, and a very material one. The dress worn at these parties, particularly by females, is in general much lighter than that to which they are accustomed at all other periods. It follows, therefore that, when they are heated from dancing or from the high temperature of the room, the least exposure to cold, in consequence of a current of air, the opening of a door or window, the entering into a cool apartment, or the passing into the open air, will be productive of some of the more serious diseases.

Q. Is exposure to the night-air of itself injurious?

A. In all climates and at all periods of the year, without proper precaution, exposure to the night air, and particularly in an open carriage, is extremely dangerous. But it is more particularly so in warm climates or seasons, towards the close of summer and autumn, and in all damp and marshy neighbourhoods.

Q. Is the health of children exposed to injury, by being permitted to attend late at crowded assemblies?

A. Even more so than that of adults. They should never be allowed to be present

at such assemblies, unless it be for ten minutes; just time enough to satisfy the vanity of their parents. Whether employed in study, dissipation, or pleasure, late hours destroy the freshness of the complexion and the beauty of the countenance, of both children and adults.

Q. Is dancing a proper exercise for the night?

A. Dancing (unless protracted too long after midnight) moderately practised in a dress which does not compress the body so as to restrain its motions, and in rooms neither too warm nor too crowded, and when the stomach is not charged with food, has no injurious effects on the constitution of young people. Nay, in the case of many young females, such an exercise is decidedly salutary.

Q. What is to be apprehended from immoderate dancing, during the latter period of night or until morning?

A. Exhaustion of the system, the destruction of the freshness, bloom, and sprightliness of youth; and when obstinately persevered in for many nights, or through a long season of pleasure, it will induce disease in some

vital part, and serious deformity of the body, that will speedily terminate in death. I grieve to say, that in my capacity of a London physician, I have had to witness many examples of this unfortunate practice, and still more unfortunate result.

Q. Would not immoderate exercise in dancing induce sound sleep, and thereby bring its own remedy?

A. Nothing can be more erroneous than such an opinion. Excessive dancing, like any other excess of fatigue, drives away instead of courting sleep. This is a general complaint among desperate and incessant dancers. They have therefore no chance that way.

Q. Does not the same cause give rise to distressing and frightful dreams?

A. Assuredly. Next to the presence of indigestible food in the stomach, there is not a more fruitful cause of disturbed sleep and frightful dreams than immoderate dancing, and dissipation generally.

Q. What other causes tend to produce restlessness during night, or broken and disturbed sleep?

A. Excitement of the mind until a late hour of the night, a very small badly ventilated sleeping apartment, too many or too few bedclothes, ligatures tightly drawn about the neck, or limbs, a constrained posture of the body.

Q. What circumstances connected with the bed-chamber are likely to prevent sleep?

A. Sleep is prevented by a bed-chamber being either too warm or too cold, and by its not being sufficiently dark and secluded from noise.

Q. In a cold room, or during chilly or inclement weather, what should be done to invite sleep?

A. A fire should be lighted in the apartment an hour or two previously to going to bed, before which fire the bedclothes should be thoroughly aired. We should keep on our stockings and lie down in a dressing-gown, and while out of bed we ought not to sit down or stand still.

Q. You stated a little while before, that excessive fatigue will prevent sleep. Can you explain the reason of it to me?

A. Excessive fatigue prevents sleep in consequence of the feeling of pain or soreness in the limbs, which either accompanies or results from fatigue.

Q. Are strong mental emotions unfriendly to repose?

A. The occurrence of sleep is generally impeded in those whose minds are a prey to anger, sorrow, anxiety, disappointment, remorse, as well as love and excessive joy.

Q. By what means can we remedy any inability to sleep?

A. By avoiding, in the first place, all those causes of sleeplessness which I have enumerated; by preserving, in the next place, as cheerful and contented a state of mind as possible; lastly, by early rising, strict temperance, and active bodily exercise.

Q. What other means is there of producing sleep, besides opiates?

A. Putting the feet in warm water, washing the head in cold water, and brisk friction applied to the surface of the body with a hand-brush or coarse towel, before retiring to rest, have frequently induced sound and refreshing sleep.

Q. When sleeplessness arises from cold feet, what should be done ?

A. If it be occasioned, as is most generally the case, by disorders of the stomach, this cause of inability to sleep can only be permanently removed by restoring the healthy condition of that organ. If the coldness of the feet be accidental, much advantage will be derived from friction applied to them, and from covering them with warm clean worsted socks.

Q. Is there any objection to opiates in cases of sleeplessness ?

A. Opiates will, no doubt, in such cases, produce sleep ; but their first use is to be resisted as much as possible, as it will generally be found necessary to repeat them in increased doses night after night. The general influence of opiates, frequently used, on the constitution is of a pernicious nature.

Q. What precaution should a traveller take in regard to the bed-chamber he is to occupy at night, and his bedding ?

A. He is to take especial care that both be well aired, and perfectly dry and clean.

Q. How may he escape many of the diseases

to which persons compelled to change often their abode are liable?

A. By selecting a chamber in the upper part of the house, the windows of which should be carefully closed before sunset—by drying and ventilating the room by means of a fire previously to retiring to bed—by carrying with him, and using, wash-leather sheets to his bed, the one under, and the other over him, and both lined on the side next to him with strong yet soft calico. He will thus be sure of escaping colds, rheumatism, lumbago, and many more serious disorders.

Q. Is travelling at night injurious to health?

A. It is so, if continued for many nights successively. Travelling, when undertaken for the sake of health, should consist of a succession of airings executed in the day only, and lasting from eight to ten hours each day. In this manner we progress comfortably and healthily unto our journey's end.

CHAPTER XIV.

PASSIONS.

Q. Have the passions any immediate connexion with our health?

A. As most of the passions of man affect the head or the heart, their connexion with health is rendered manifest.

Q. Is it only by the control of them that we can benefit our health?

A. By controlling many, and exciting a few of them.

Q. The influence of the many, therefore, must be considered as pernicious to health, since you speak of controlling them?

A. Exactly so. They are pernicious when inordinately indulged in.

Q. In what way are those passions which we ought to keep under control, if we desire to maintain health, likely to affect it?

A. Those passions which affect the brain, carried too far, give rise to a state of irri-

tation of the system, which manifests itself in a variety of ways and degrees. Heat, headach, chronic or acute inflammation, insanity, palsy, apoplexy, and even epilepsy, are some of the ill effects, as far as the head itself is concerned, which inordinate indulgence of the passions will produce. But there are others which show themselves in different parts of the animal economy; and the principal of those is a greater irritability of all the parts of the body. The internal organs as well as the external senses, become endowed with a keener sensibility; muscular weakness, languor, or disturbance of the external functions, generally follow; and diseases are brought about, when least expected, in the heart, lungs, or internal and vital parts of the body.

Q. Does the influence of the uncontrolled passions produce the same dire effect on different individuals and temperaments?

A. No. The brain on those occasions reacts in preference on those parts of the body which sympathize most with itself; and above all, on those which are most irritable. Thus, in a person possessing a sanguine temper-

ament, it is the heart that suffers, or the lungs become the seat of disease; in a bilious subject, the stomach, liver, and duodenum (upper part of the bowels) are sooner affected; in scrofulous and lymphatic individuals, the mesenteric glands, or even, sometimes, the glands placed under the skin, assume a habit of disease. I have known a person who, while labouring under a fit of anger, is suddenly attacked with diarrhœa, which lasts as long as the fit of passion keeps fast hold of his mind.

Q. What disposition of mind is most conducive to health and longevity?

A. A calm, contented, and cheerful disposition.

Q. What are the passions most prejudicial to health?

A. Anger, hatred, revenge, jealousy, fear, grief, and despair.

Q. Why are these most prejudicial?

A. Because their bad effects on health and even life are sudden and rapid; whereas the ill effects of other passions, hereafter to be mentioned, inordinately indulged in, are slowly and progressively developed.

Q. Has the immoderate indulgence of any of the former passions, anger for instance, affected life?

A. Frequently. Violent anger has been known to produce immediate death, by inducing apoplexy, and the rupture of blood-vessels.

Q. What persons are most subject to inordinate fits of anger?

A. Those who are intemperate in eating and drinking, or such as indulge in the frequent use of ardent spirits.

Q. In whom is the indulgence of anger more likely to be attended with fatal effects?

A. In those of full habit of body, with short thick necks, and large blood-vessels in the neck, labouring under disease of the heart or lungs, or who are subject to a spitting of blood, or convulsions.

Q. Have violent paroxysms of anger been known to affect the child at the breast, when a wet-nurse or the mother have been subject to them?

A. Such a change in the properties of the milk has been produced by that circumstance, as to cause convulsions, and even the death of the infant.

Q. Is hatred a passion as fatal in its effects as anger ?

A. No : its effects on our mind and body are too slowly developed, and prolonged to a period of too much duration, to be, like anger, highly pernicious. Still, its influence on health is undeniable. The same may be observed of revenge, which generally follows in the train of hatred. Its movements are slow, and calculated. It broods on its object or victim ; it keeps the brain and heart in a constant state of physical irritation, but does not produce the same awful inroads on the constitution as anger.

Q. What observations are you disposed to make with regard to jealousy ?

A. That jealousy would not exist were we free from vanity. Upon our health this distressing passion produces the same effects as mortified ambition. It is always the brain which is the primitive seat of the disorder it occasions, whence the influence extends by sympathy to the heart and the abdominal organs, but to the former more particularly.

Q. Is fear another of the depressing passions ?

A. It is : under its influence, the force of

the heart is diminished, and the pulse rendered weak and variable. Such is the influence of this passion on the circulation, that a vein, when opened with the lancet, has refused to yield blood. We can judge of its debilitating effects by the paleness of the countenance, the peculiar change which takes place in the skin, the shivering and faintness which are its attendant symptoms. Fear weakens the digestive power, and causes many disorders of the stomach and bowels. It also renders us more liable to be attacked by epidemic, as well as by contagious disorders.

Q. Has excessive fear been known to destroy life?

A. It has frequently caused sudden death, or when the effect has not been so violent, insanity, convulsions, or a state of fatuity have ensued.

Q. What effect has extreme fear upon the hair?

A. It has been known to render it perfectly white in an instant, or in a few hours.

Q. Is not the same effect more generally produced by grief and anxiety?

A. It is; but more commonly in a longer period of time.

Q. Are those who enjoy indifferent health more liable to fear?

A. They are so, particularly if labouring under nervous disorders.

Q. Are there no instances, however, of persons in perfect health, and endowed with great bodily strength, who have been subject to excessive fear?

A. Yes: ignorance, superstition, and guilt, will, in some people, cause the mind to be disturbed by extreme terror from the most trifling causes, when neither the strength nor the health of the body is impaired.

Q. Is not grief a most destructive passion?

A. Its action is slow and sure: it corrodes the heart into which it sinks deeply; there, as from a centre, it extends its baneful influence to the lungs, the head, and the stomach. It disturbs most of the healthy functions of the body, and totally suspends others, until, at length, life falls exhausted under its cankering effects.

Q. Is the indulgence of ambition injurious to the system?

A. Ambition, governed by discretion and directed to commendable objects, has a bene-

ficial influence upon the system; but when inordinate, or tending to improper or unworthy ends, its effects are in the highest degree prejudicial.

Q. Will not blighted ambition lead to despair?

A. It will so, and despair is mania.

Q. Turn we now to some cheerful view of human passions. What of joy?

A. Joy, when moderately indulged in, increases digestion, promotes the circulation in the heart and arteries, and produces heat and perspiration. The high mental gratification by which it is accompanied, often produces a struggle which is relieved by a flow of tears. Joy acts as a beneficial stimulus upon the brain and nervous system; and in the hands of a skilful physician, may be made the instrument of recovery from several obstinate disorders.

Q. Has the sudden destruction of life ever been caused by excessive joy?

A. It has; although not so frequently as by violent bursts of anger.

Q. Has the indulgence of hope any beneficial effect?

A. The anticipation of future good, or of some favourable change in our condition or prospects, when moderately indulged in, produces the same beneficial effects as moderate joy; but irrational, ungrounded, or misplaced hopes, on the other hand, are productive of injury, which is increased by the severe disappointment and chagrin to which their ultimate failure sooner or later give rise.

Q. Has not the hope of a happy immortality, the power of increasing our health and longevity?

A. There can be little doubt that the state of mind caused by the unwavering and unshaken possession of such hopes, produced by faith and thorough conviction, acts beneficially upon our health, and may even prolong our days.

Q. Is the studious cultivation of a kind and virtuous disposition influential in promoting health?

A. It is in a very high degree. The fact cannot be too strongly impressed upon the mind of youth, that between vice and disease there exists an intimate connexion.

Q. When individuals are attacked with

disease, in whom is the danger always the greatest?

A. In those whose minds are in a constant state of perturbation from the indulgence of passion, or are depressed by fear, grief, anxiety, remorse, or disappointment.

Q. Are not such individuals, likewise, those most subject to diseases of the mind, and to the loss of reason?

A. It is unquestionably the case that in such, nearly all the diseases of the mind, including mania, are of more frequent occurrence than in those whose passions are less active, or kept more strictly under the control of reason.

Q. What influence has the inordinate indulgence of the passions upon the natural disposition to sleep?

A. It very generally suspends it. Persons labouring under the influence as well of the exciting as of the depressing passions, have been known to experience an inability to sleep for many nights.

Q. Does the inordinate indulgence of the passions produce any effect upon the nutrition of the system?

A. It almost always diminishes it: hence the peevish, and those who labour under sorrow, anxiety, and disappointment, or whose minds are the seat of jealousy, hatred, or remorse, very generally become emaciated.

Q. While the state of the mind has so powerful an influence over the health of the system, is the mind in any degree affected by the state of the body?

A. The influence is reciprocal: a slight disturbance of the stomach from too much or indigestible food is often sufficient to render the temper of an individual irritable and peevish, or discontented with every thing to which his attention is directed, and make us easy victims of the passions I have deprecated.

CONCLUSION.

Q. You have now led me successively from early infancy through childhood, youth, and manhood, to old age; showing me, in a clear and distinct manner, the various modes by which health and vigour of constitution may be promoted; and pointing out the causes by which both are impaired. What general conclusions am I warranted in drawing from your instruction?

A. You are entitled to conclude, that if we have been fortunate enough to owe our birth and education to healthy, well-informed, and industrious parents; if from our earliest infancy we have constantly breathed a pure, fresh, and dry air, and have been permitted to give to our limbs their natural motion in daily exercise; if our persons and our apparel have always been remarkable for strict cleanliness; if in regard to our food we have invariably observed moderation, regularly and implicitly drinking at the same time nothing but

pure water, or very diluted wine; if our houses are orderly, clean, dry, and well ventilated; if we have been trained from our youth to assiduity, industry, and method; if our reason and virtue have been fortified and improved by instruction and example; and our passions taught, by wholesome discipline, not to trouble our spirit; if, in fine, we have learned to fear God, love mankind, and do justice to all—we may confidently expect to enjoy continued health, and the happiness which results therefrom—with a well-grounded hope, moreover, of prolonging our mental and physical powers to the latest period of our existence.

PART III.

FACTS RESPECTING THE NATURE, TREATMENT, AND CURE OF CHOLERA.

FIRST SECTION.

WHAT IS CHOLERA? IS THERE A SPECIFIC DISEASE OF THAT NAME OF FOREIGN ORIGIN, WHICH HAS NEVER APPEARED IN ENGLAND?

Q. In these times of great popular alarm at the possible appearance, among us, of a pestilential scourge, said by many authors and periodical writers, to be even more fatal and appalling than the plague itself, would it not be adding to the benefit which society cannot fail to derive from the simple rules for the preservation of health contained in your Catechism, if you were to give us a plain statement of the nature of this malady, the best mode of preserving ourselves from its attacks, and the treatment to be adopted for its cure, most likely to be successful?

A. The alarm which has been excited about CHOLERA, and the ravages it commits, is indeed great, and I will be free to say, unnecessarily exaggerated. Those who have been instrumental in exciting it, have but ill served the cause which led them to adopt such a step, and will find their own intentions defeated. As I before stated, while speaking of the passions, nothing predisposes us to become affected by prevailing epidemic disorders sooner than terror.

Q. Do you mean that more alarm has been excited, than there was any occasion for, by the particular character which those writers have given to the disease itself, with respect to its nature and fatal termination; or do you intend to apply your observation to the strict measures which the government has adopted at the suggestion of those individuals who were consulted upon the subject?

A. I allude to both those sources of popular terror, and I consider it to be the duty of every well-wisher to the community in the present emergency, to allay, if he have it in his power, the fever of the mind, which is, too frequently, the first stage of that of the body.

Q. What is *cholera*?

A. The name given to a disease prevalent from time immemorial in every country in the civilized world, and making its appearance generally, and in its more ordinary form, at the close of the summer, during the autumn, or in the rainy season.

Q. Does the name itself imply any thing that has a reference to the nature of the disease?

A. Not at all. The name is derived from two Greek words, the one meaning *bile*, the other *to flow*, and is meant to imply that this is a bilious disorder, or an overflow of bile—literally a *bile-flux*—a fact questionable in all species of cholera, but nearly disproved in that severer form of the disorder which is now occupying so much of the public attention.

Q. Then *cholera morbus* means no more or less than bilious disorder; as one would say bilious fever or bilious complaint?

A. Just so. And you will immediately perceive the incorrectness of the name, when you shall have been informed that in the severer form of cholera, except in a few cases, bile does not make its appearance either at the

outset or during the progress of the disease, but only at the commencement of the recovery.

Q. But I have also heard the severer form of this disease named *spasmodic* cholera and *Indian*, or *Asiatic* cholera: are those appellations more appropriate?

A. Neither of them is. The first would imply that *spasm* accompanies only the severer form of the disorder; whereas it is a symptom present in all species of cholera: while the second would equally mislead us, if it induced us to believe that the severer form of cholera is of Indian or Asiatic origin; for, cases of the most fatal description of cholera have, from time to time, occurred accidentally, as well as *epidemicallly* in all parts of the world, attended by every symptom which characterizes the cholera at present raging in Europe. In 1821, an expedition sailed from Trieste, under the command of Baron Schimmelpenning, for the purpose of circumnavigating the globe. It was, I believe, the first that the Austrian government had ever sent out on such an errand; but the accomplishment of its intention was thwarted by the spontaneous appearance of cholera, soon after

the arrival of the expedition in warmer latitudes. It proved fatal, in a very short time, to nearly the whole of the crew, including the captain, and the celebrated botanist Bohms. In 1600, cholera, in its severest form, made the tour of Europe, and destroyed a very large proportion of those who were attacked by it. The same complaint is now following something like the same course.

Q. Then I am to understand, that *the* CHOLERA with which we are threatened as something new to this country, and against the expected importation of which from the continent, the London Gazette, of the 20th of October, contained sundry extraordinary rules and regulations, is only what is already known as cholera in England, or any where else, with this difference, that its symptoms are more severe, its progress more rapid, and its results more fatal?

A. Exactly so. Another difference between the two forms of the disease has been mentioned, which, however, I know from the experience even of the last few weeks, can no longer be relied upon as an indispensable and distinguishing symptom of the *two* degrees of cholera. It has been stated that bile flows

freely from the first onset in the milder, and not at all in the severer form of cholera ; but to this I have to oppose the fact of my having witnessed more than one case of the usual national cholera of the present season in London, in which the evacuations were totally destitute of bile, or at least of the colour of it, and resembled dirty mortar-water.

Q. Will you describe to me, in as plain terms as the clearness of the subject will admit (avoiding all professional or technical terms which are not positively indispensable), an attack of the more usual cholera of this or any other European country in the severest form in which it has ever been known to occur, whether in a few or many instances ?

A. I will do so, and in order to do away with the possibility of its being supposed that the description is taken from the disease now raging in Europe, instead of the disease as it has occurred from time to time in this country—I will simply translate to you the words of a great English physician (Sydenham) who witnessed a very severe species of cholera, which he tells us prevailed more epidemically in the year 1669 in London, than he ever remembered to have known before.

“The Cholera Morbus,” says Sydenham, “is easily known by the following signs: Immoderate vomiting and a discharge of *vitiated humours* by stool, with great difficulty and pain; violent pain and distention of the belly and bowels, heartburn, thirst, quick pulse, heat, and anxiety, and frequently a small and irregular pulse; great nausea and sometimes colliquative sweats; contraction of the limbs, fainting, coldness of the extremities, and *other symptoms*, which greatly terrify the attendants and often destroy the patient in twenty-four hours.”

Q. That is bad enough, and if many hundred such cases occurred when Sydenham witnessed the disease, and the *patients were often destroyed in twenty-four hours by it*, no doubt but that the town must have been in a state of the greatest alarm, and the inhabitants might have fancied that they had the plague once more amongst them.

A. Precisely so; and this is what happens in all cases of ordinary disorders, whenever they assume a character of unusual malignity followed by death. The community, so afflicted, imagine that a new disease has made

an irruption amongst them which is believed to be foreign to the climate they inhabit, and to be multiplied by the intercourse of the healthy with the sick.

Q. Will you now proceed to describe the cholera as it may have appeared from time to time in this country, since the period in which Sydenham practised, in order that it may be ascertained whether the same complaint, with precisely the same symptoms, is to be found amongst the diseases incidental to the climate of England?

A. I will do so, taking my description from a well known and popular physician, from whose writings I collect the following symptoms as those of the severer form of English cholera: The attack is sudden; beginning with soreness, pain, distention, and sometimes contraction of the belly, with spasms of the muscles of that part, and of those of the calves of the legs, severe and frequent vomiting and purging, generally of a bilious character, heat, thirst, hurried respiration, frequent, weak, and fluttering pulse—when the disease proceeds with much violence, the spasm extends with great pain to most of the muscles of the

body: these symptoms are followed by great depression, with cold clammy sweats, considerable anxiety, a hurried and short respiration, with a sinking and irregularity of the pulse, which quickly terminate in death, an event that not unfrequently happens in twenty-four hours. That such is the form of cholera which has appeared from time to time in this country, is proved not only by the above symptoms, given by a physician who had had ample opportunities of witnessing the disease he described, but by his description having been adopted by several authors and compilers of medical works. The periodical journals of the country, particularly of this year, teem with fatal cases of cholera, illustrative of the above description, and of that of Sydenham.

Q. Does the cholera with which we are threatened, then, differ from either of those in the train of its symptoms?

A. You shall judge for yourself. As I have, for reasons obvious in a work of this kind, given the description of the severer form of cholera, as it occasionally appears amongst us, in *general terms*; I shall adopt the same

course in offering you a description of the severer form of cholera, as it has, from time to time, and particularly of late years, appeared in India, and very recently in several countries in Europe. I shall omit, as wholly unnecessary, all those minute touches of the descriptive pen of the London Board of Health, who, in addressing an unprofessional public, presented it with so frightful and horror-inspiring a picture of that disease; lending to it, as it were, a personal entity, assigning a birth-place to it on the heated shores of the Ganges in 1817, and making it stalk, like Satan, over the extended regions of the earth, from India to Hamburgh, with death and desolation in its train. My authority for the following series of symptoms is the report of the Medical Board of Bombay. Giddiness, nausea, violent vomiting and purging of a *watery, streaky, whey-coloured or greenish fluid*, severe cramp of the fingers and toes, legs, thighs, and muscles of the belly, constriction and oppression of the stomach, great sense of internal heat, inordinate thirst, pulse almost imperceptible, or so weak as to give to the fingers only an indistinct feeling of flut-

tering—respiration laborious and hurried—skin cold, clammy, and covered with large drops of sweat—great prostration of strength, anguish, and agitation—and death takes place generally within eighteen or twenty hours. These symptoms agree with those given by the different authors who have written on the cholera which appeared since in Russia and Poland.

Q. There is one very prominent sign in the disease you have described as occurring in England, in its severest and most fatal form, and in that which raged in India, Russia, or Poland, which is said to differ materially in each complaint. In the one case the matter ejected from the stomach and bowels is described to be bilious, in the latter to be like whey or water-gruel. Is that not a sufficient character of distinction between the two disorders?

A. In the first place I will beg you to remark, that in the description given by Sydenham, no such mention of *bilious* vomiting is made—but that on the contrary he abstains from using the word bile in the case (although he must have been well acquainted with the nature of bilious excretions, since he has described a bilious colic which prevailed

in London in the succeeding year), and uses the expression of *vitiated humours* instead—implying of course, that the humours thrown up, or which passed by the bowels, were different from ordinary bilious evacuations. In the second place I have to observe, that even in cases of the severer form of cholera in India, Russia, and Poland, the peculiar whey or watergruel-like evacuations were not always present, there being not unfrequently a tinge of bile among them. Mr. Scott, who drew up a medical report of this disease at Madras, says that in some cases the matter evacuated was of a *yellowish and greenish hue*. So that it would appear as if in the severer form of English cholera bile was not always present in the matter ejected, and that in the same form of foreign cholera, on the contrary, bile was occasionally present. Hence the distinction is not permanent. Within the last few weeks I have seen a case of severe English cholera, in which the patient narrowly escaped from death, where the matter ejected was exactly like dirty mortar-water without a particle of bile in it.

Q. But let us suppose the two symptoms

of bile or no bile being present in the matter ejected to be constant, would that circumstance be sufficient to make the two disorders distinct from each other ?

A. Decidedly not, for any practical purpose. The nature of the disease would remain the same; and as the severity of its form is only to be judged of by the accumulation of all the other symptoms, particularly those indicative of bodily suffering, and of impaired circulation, which exist alike in both the domestic and foreign malady,—and as the treatment is to be shaped in each case according to the severity of those symptoms,—the distinction attempted to be drawn on such a ground, between the English and foreign cholera, in their severer forms, is, to say the least, useless.

Q. Are there not some other distinguishing marks to be traced between the English and foreign severe cholera ?

A. There may be in the intensity of some of the symptoms; but the same symptoms, both as to number and description, are present in the English as well as foreign cholera.

SECOND SECTION.

IS CHOLERA A DISEASE THAT TRAVELS FROM PLACE TO PLACE, BEING CONVEYED BY MAN OR GOODS?

Q. What is a medical board?

A. A body of professional men, either appointed by a higher authority, or self constituted, meeting for the purpose of watching over the interests of the profession, or the health of the public.

Q. You have mentioned a London Board of Health, is that a board such as you describe?

A. The London Board of Health is formed of several eminent physicians, appointed by direction of the Secretary of State for the Home Department, and charged with the specific duty of collecting information respecting the cholera which has been raging in Asia and Europe for several years, and of suggesting such means as are most likely to prevent its appearance amongst us, and to cure it, should it unfortunately make its appearance.

Q. What has been the result of their labours ?

A. They have made several reports, which have been published, and in which they come to conclusions that the events of a few subsequent weeks have shown to have been precipitate ; and they have recommended measures which the same events have proved to be useless and consequently unnecessary.

Q. What were those conclusions ?

A. That the cholera which raged in India is a peculiar disease of itself, that it has been conveyed by men and through the agency of merchandise from one place to another on the continent of Asia and Europe, like the Levant plague, and that it will reach this country unless the strictest laws of quarantine are observed.

Q. What are the measures which they have recommended ?

A. These are of two classes. The one preventive, the other sanative.

Q. What are the preventive measures ?

A. Strict maritime and inland quarantine regulations, or, in a few words, regulations by which the ports, and every inch of the coast of Great Britain, are to be closed against the

landing of travellers, or the introduction of merchandise coming from any foreign place or places in which the severe form of cholera has been known to exist; and which regulations were likewise to extend to the shutting up of every town in England, the moment the disease made its appearance in it, to the enclosing of every house in which cholera showed itself, and to the abandoning of every poor unfortunate being who might be afflicted with the disorder, to the mercenary attendance of hired nurses, having previously put the black mark on his dwelling by writing upon the outside either the word SICKNESS, or CAUTION in large letters.

Q. Have the Board taken pains to disseminate among the public these regulations and suggestions, as well as their notions and conclusions respecting the disease in question?

A. They have, and the government have assisted them in that respect by inserting their notions, conclusions, suggestions, and regulations in the London Gazette, accompanied by certain authoritative orders in conformity with those suggestions. But this is not all, a worthy and most excellent physician, to whom humanity and the medical profession are

deeply indebted, and who has been fast descending in the vale of years, taking up that identical Gazette for his text, has raised his voice of warning to the public, repeating and enlarging on the suggestions and conclusions of the Board of Health; while, on the other hand, a periodical publication, of much weight and extensive circulation, catching the zeal of those worthy individuals, has disseminated, with a tenfold intensity of language and absurdity, their doctrines and precepts.

Q. And what has been the result of these sayings and doings?

A. There has resulted from them a state of the greatest alarm in the mind of the public, scarcely to be believed,—a perfect panic,—a paralyzation of the common affairs of life,—and such a mistaken position of the country, in regard to other countries in Europe in which cholera has not yet developed itself, that England has been put out of the pale of nations by them, and all intercourse with her repudiated.

Q. Were the eminent physicians you mention, who composed the London Board of Health, personally acquainted with the par-

ticular disease which was to have guided their operations ?

A. Not one of them had ever seen the disease which they had determined to look upon as a specific disorder, different from any we have ever had in this country ; although most of them must of necessity have become acquainted, in the course of their practice, with the severe and fatal form of cholera occurring from time to time in England.

Q. Were these same members of the Board well and practically acquainted with the nature and effect of quarantine regulations, their necessity and happy result when applied to the warding off of the Levant plague ?

A. There was the superintendent-general of quarantine, and the director-general of the Army Medical Board * who have seen the plague and know the effect of quarantine regulation, but none else, out of ten members, besides, including the secretary, had ever formed the slightest acquaintance with either.

* A ludicrous mistake occurs in the list of the members of the Board, as prefixed by themselves in one of their reports. Sir James Macgregor is there styled " Director-General of the Army."

Q. I marvel not, therefore, that, unacquainted with either the disease or the nature and effect of the regulations they were called upon to frame, the Board have fallen into the error of first frightening the public, and next of recommending measures, most of which being impracticable, must create confusion and distress, while, through the disappointment which they will necessarily lead to, they would be found injurious instead of beneficial.

A. *Lead* to, you say. Say rather *have led*: for in the case of Sunderland, the appearance of cholera in that town, within the last fortnight, has created a greater degree of sorrowful disappointment in the nation than would otherwise have occurred.

Q. What had the Board promised to the public, the nonfulfilment of which could lead to such a disappointment?

A. The Board in their manifesto, the government in their orders in council, Sir Gilbert Blane in his warning to the British public, and, last and *most*, the Quarterly Review in their archi-absurd articles contained in the 91st number, had led the public to believe that if the quarantine laws were

strictly enforced, the disease would not appear amongst us. Now the quarantine laws were strictly enforced in the port of Sunderland, to the great inconvenience of their trade, and had never, as it has since been officially asserted, been infringed; yet cholera in its worst form made its appearance in that town, destroying its victims in the same frightful proportion in which the same malady was destroying them on the neighbouring coast of the continent, and with precisely the same symptoms.

Q. What led the Board to make such a promise, which has got them into so awkward a scrape?

A. A first and fatal error: that of supposing that severe and fatal cholera had never existed until it showed itself in India, in 1817; whereas even upon that point they are wrong, since the same disorder was described as fatally prevalent in the hospitals of Madras ten years before, under the vulgar and awful name of "*mort-de chien*," (dogs-death, from the acute suffering of the patient): and a second still more fatal error, that of supposing the disease to possess the character of the plague, and of being transmitted from one place to

another through the agency of man or merchandise, in order to account for its successive development in various parts of Asia and Europe. Thus did these physicians reason. The cholera took its rise at the mouth of the Ganges; it went to China on the one side, and to Persia on the other: from thence to Russia, Poland, Austria, and Prussia. It is now at Hamburg, and if you do not prevent men and goods from being introduced into this country, from that city, or any other where the cholera may be raging, the disease will be introduced along with them. What has happened? The introduction of men and goods were prevented, but not the appearance of the disease.

Q. What are we to conclude from that striking fact?

A. That cholera is not a *contagious* disorder, but an *epidemic* one: that it is not a transmitted malady, but one spontaneously evolved in the countries in which it has raged, and likely to do so in Holland, France, Italy, and other countries hitherto free from it, in the course of the next two years.

Q. I wish you would enable me, by some

simple explanation, fully to comprehend the meaning of the two words you have just used—contagious and epidemic?

A. In the year 1819, having found it necessary to support and defend the very doctrine, as applied to the PLAGUE of the Levant (then called into question by interested or mistaken persons*), which I am now compelled to dispute as inapplicable to CHOLERA, I took pains to convey in plain language, illustrated by facts, the real meaning of those two words. I need only repeat, though in fewer words, what I then said, to make you understand the meaning of *contagious*, and *epidemic*.—"On the 29th of March, 1813, a vessel called the San Niccolò arrived at Malta from Alexandria in Egypt, where the plague was raging at the time the vessel left that place. During the voyage, two men fell ill and died. At the moment of his arrival at Malta, the master of the San Niccolò, together with the surviving part of the crew, appearing to be healthy,

* See "A Letter to the Rt. Hon. F. Robinson, M. P. (now Lord Goderich), President of the Board of Trade, on the Plague and Contagion, with reference to the Quarantine Laws. By A. B. Granville. London, 1819."

were allowed to disembark in the lazaretto, leaving their clothes behind, and undergoing several precautionary operations. The crew were provided with two separate apartments in the lazaretto, and the captain and his servant lived together in a third. The whole of them seemed to enjoy the most perfect health till the 1st of April, when the captain, while playing at ball, was suddenly seized with headach, giddiness, and other symptoms of the plague; and he died in the course of about thirty-six hours. The servant, who had assisted the two men lost during the voyage, and had subsequently attended his master during his illness ashore, was seized with similar symptoms at the same time; and died after a like interval:—they were both buried in the lazaretto. This event created some uneasiness amongst the inhabitants; but as the vessel had been sent back to Alexandria, and the most perfect health prevailed in the island, they soon began to congratulate themselves on their supposed escape. On the 19th of April a child died of a suspicious fever; on the 1st of May, the mother gave birth to another child, who died immediately

after; and she herself expired before the next morning with tumours in both groins. A third child and the father of this unfortunate family were next attacked with the complaint; and the latter, in particular, exhibited glandular swellings under the arms, and in the groins. The woman who had performed the office of midwife to the mother, on being visited by a person, her relative, on the 6th of May, was found to be dying of the same disease; to which the relation also fell a victim on the 17th. Thus from one individual to another, all of whom, it was proved, had reciprocally communicated with each other, and with part of the crew of the vessel, the complaint spread among the population, and ultimately committed those ravages which afflicted the island of Malta in the year 1813. Such is the portrait of **CONTAGION**; and the disease which follows such a course is **CONTAGIOUS**.

“ A family is taken ill at a particular season of the year with any known disease. Another family or person is soon afterwards similarly affected: and many more follow under the same circumstances, until the greater part of the inhabitants of a town or district have,

more or less, experienced the same morbid influence on their system. The same occurrence may take place in a prison—a camp—an hospital—a manufactory—a ship:—the disease goes through its various stages, often unchecked by any effort that can be made to extinguish it. It disappears at last, and for a time, generally indefinite, does not occur again; or it reappears at uncertain epochs: or another disease takes its place, following the same course, affecting equally the greater number of the inhabitants of the place or district where it appears, and terminating at last in the same manner. A catarrh is known to have affected, at particular epochs, two thirds of the inhabitants of a town. Carli, in his History of Verona, observes, that this disease had been so prevalent in 1438, that it overran the whole of Italy, and was principally fatal to children and old people. The influenza which prevailed in London in the year 1782 was of this class. The croup, the hooping-cough, &c. are known to make their appearance, some years, in particular places, where they attack indiscriminately many individuals. The former became so

prevalent in some of the French provinces about the years 1809 and 1810, that Bonaparte offered a premium of 12,000 francs for the best treatise on that disease. An old physician, Sennertus, states, that a particular malignant fever with spasm afflicted the bishoprics of Cologne and Westphalia in 1596-7. While Mantua was besieged by the French army in 1796, upwards of 25,000 citizens and soldiers perished from a peculiar fever: yet after the French army entered that town, no case of that disease occurred, either amongst the inhabitants or the garrison. We read in the History of France, by Mezerai, that a peculiar sort of cough, with fever, attacked generally and indiscriminately all the old people in Paris, during the months of February and March, 1414, and that the name of *coqueluche* was given to it from a particular cap called *coqueluchon*, used to keep off the cold air so pernicious in this complaint: nearly the same with that which has since appeared in Paris, called *Le Gripe*, which is reported to have affected 140,000 inhabitants.—During the siege of Genoa in 1799, a petechial fever prevailed among the garrison and the inhabitants, the

greatest part of whom felt its bad effects : some parts of the town seemed more exposed to the influence of this disease than others, and a very limited residence in those parts was sufficient to develop the disease in a healthy individual. The same occurred a few years later at Leghorn—and again at Malaga ; in both which places, sleeping one night only in the town was followed by the disease. The fever which has been called the *typhus*, followed both in England and Ireland, in 1817 and 1818, the same course. Particular districts of a town, and even particular parts of the same house, seemed more liable to the development of the disease than others. The same is recorded of those febrile complaints which have prevailed in some parts of America within the last twenty years. Such again is not the history of contagious, but of EPIDEMIC diseases.”

Q. But I frequently find the word *infectious* employed synonymously with that of *contagious* : is that correct ?

A. It is a manifest error to do so ; and I am sorry to say, an error by no means uncommon. In the very question which now agitates the country, the one word is confounded

for the other. The Board of Health, like many other writers, have fallen into this error. I will illustrate the difference by quoting from the same work what is meant by the word *infectious*. "If, during the prevalence of *epidemic* diseases, the deaths be numerous, and the burials carelessly conducted; if there be a great want of cleanliness in the persons attending the sick, and the sick themselves; if the effluvia arising from diseased bodies are not quickly carried away by ventilation; and the healthy be forced to mix with the sick, breathing the atmosphere in which they linger, the disease may then become *infectious* from those causes." That is; persons in health, equally subject, with all the other residents in the place in which an epidemic disorder rages, to the influence which produces that disease, whatever that influence may be, will be the more liable to fall ill, in proportion as they breathe an air unsuited to the healthy functions of life, in consequence of the accumulation of many sick, foul linen, animal excretions, intemperance, &c. causes which at all times would produce *any* disease in the human body; but which, in the case of an *epidemic* disorder being already prevalent, incline the bodies of the healthy to

assume the particular form of the prevailing disorder, in preference.

Q. Then, in the case of *infectious* disorders, if I, being in health, touch or handle a patient or his clothes, but take care to keep myself perfectly cleanly, in a clean and well ventilated apartment, and live temperately, need not be apprehensive of inevitably falling ill of that disease?

A. Certainly: and the more so if you preserve your mind free from terror, observe temperance, avoid fatigue, and alternations of heat and cold, and reject all spirituous and distilled liquors. This, however, is not the case with respect to contagious disorders. Touch but a patient of the plague, or any of the linen which has been used by him; convey part of that linen to a distant spot, and let a healthy person connect himself with it, be they ever so cleanly, so temperate in their diet, so stout of heart and mind—ninety to one but such individuals will be affected by the disease. Not so with the cholera.

Q. I conclude that there must be exceptions to these general assertions?

A. There are, as in all general rules, and they arise from individual peculiarities of con-

stitution, observable during the prevalence of both epidemic and contagious disorders.

Q. Let us then apply these principles and definitions to our present purpose. You would say that the cholera which has appeared in several parts of Europe and Asia, and which has since appeared on the coast of Great Britain, is an *epidemic* disorder spontaneously developed in each of those places, and not transmitted, like the plague of the Levant, from one place to another; and that, therefore, any regulation which would keep off the latter, would be found useless in warding off the former?

A. Just so; with the addition of this other position, that the cholera in question has been proved to be one and the same malady in all the places you allude to—and is only a severer form of a well known disease which has from time immemorial shown itself from year to year in a milder form in all those parts of the world. That I am correct in this assertion, is proved by the fact that neither Austria nor Russia have been able to keep off from their dominions this supposed intruder and traveller, although they employed for that purpose, *with augmented vigour and severity*, the very quarantine laws

which have, all along, preserved them from any invasion of the plague—a disease acknowledged on all hands, and by the *choleric* contagionists as well, to be superlatively contagious, infinitely superior in that respect to cholera. Had the disease been a stranger to those regions, and being so unequivocally deemed contagious, had knocked for admission at their gates, as the plague has often done; the cautions and restrictive regulations which closed the doors effectually to the one for a long series of years, must have been as successful against the intrusion of a less contagious malady. That they have not done so is a matter of notoriety—hence the disorder cannot have been a travelling intruder, but a spontaneous formation of the soil and atmosphere on which, and in which, it appeared, and could *not be contagious*. They will tell you that there are different degrees of contagion—but that you must not believe; for depend upon it, experience has taught no such thing, and the soundest principles of medicine reject such a doctrine. A disorder is, or is not contagious. If it be so, it shows itself by attacking the greatest number of those who come in contact with the patients, or the different articles that have

been in direct communication with them. If it does neither, then the disorder is not catching—and that is precisely the case with cholera. Even the strictest contagionists in regard to cholera have now abandoned the doctrine of the Board of Health, with regard to merchandise, letters, goods, &c., it having been declared at Vienna, Moscow, Berlin, and St. Petersburg, that cholera is not communicable by goods, merchandise, &c., after they had made the strictest investigation on that point. And with respect to the communicability of that disease by contact between man and man like the plague, the facts produced by four-fifths of the medical men and civil authorities who have witnessed the present cholera, fully demonstrate and prove that it exists not. Even Drs. Barry and Russell, whose original reports serve to encourage the London Board of Health, in maintaining the notion of contagion, have very candidly and manfully declared in their latest communications that “The *epidemic* of St. Petersburg, did not possess those absolute and indiscriminate communicable qualities (which are) attached to plague.”

Q. By-the-by, I see in this report of Drs.

Barry and Russell, a beautiful illustration of your explanation of epidemic disorders, particularly of those which become occasionally *infectious* under the circumstances as mentioned in your publication of 1819; for they say, that “*the risk of infection incurred in the epidemic cholera of St. Petersburg by healthy persons, susceptible (not by all) who approached the sick of that disease, was in direct proportion to the want of ventilation, and cleanliness, and space around the latter.*”

A. This is certainly gratifying to me. However, I am not bound to adopt the Doctors' conclusion with regard to cholera—for after what Mr. Searle and Dr. Lefevre of St. Petersburg, have stated on their own responsibility and experience in the epidemic cholera—the latter of which has been vastly more considerable than that of Drs. Barry or Russell,—I cannot look upon cholera as *infectious*, in the sense of a presumed modification of contagion which those physicians apply to that word.

Q. Could you illustrate still further, by facts taken out of the history of the most recent epidemics of cholera, the improbability of its being contagious.

A. Nothing so easy. But in a work of

this description, necessarily brief, and addressed to the middle classes of society, any great display of learning is not to be expected. I shall therefore confine myself to two observations, and leave the contagionists to explain the circumstances according to their own tenets as they best may. A citizen arrived at St. Petersburg in a boat from Wyterga, on the 28th of May, perfectly well. On the 14th of June he was attacked with symptoms of cholera. This was the first case of the kind that had occurred this year in the imperial city. On the same day a worthy painter fell ill in a different part of the town, and died in fifteen hours. On the 16th of June the disease showed itself in a policeman of the same part of the town, in an oilman in the quarter called Liteinai, in a waiter at an hotel in the quarter of the admiralty,* and in a man in the artillery hospital, none of whom had had the slightest communication with one another. On the 17th of June eleven had been attacked, six of whom died. On the 18th two more fell

* Consult the detailed plan and topographic description of the imperial city in a work entitled "St. Petersburg," which I published in 1828.

ill, one of whom died. On the 20th of June there were already eighty-one patients at noon, and from that hour till midnight sixty-two more fell ill, all living in different parts of the town. On this same day forty died. On the 21st there were 132 patients, to whom, in the course of the day, ninety-two more were added. On the 22d the patients were 200, and 162 were the new cases. On the 23d, the patients 348, and the new cases 157. On the 24th, the patients 479, and, in the course of twenty-four hours, 141 new cases were added. On the 25th at midnight, the patients were 615, to whom 137 new cases were added in the course of a few hours after, and so on. So that, in the space of a few days, an insulated case of cholera had been multiplied into 1230 cases, scattered in every possible part of the capital, whether in hospitals or in private houses; and 558 of those patients succumbed to the disease.* Now I would ask of Drs. Barry and Russell; I would ask of the Board of Health, in London, where is the train of

* See "Journal de St. Petersbourg," Official Documents.

gunpowder, which being laid at the door of the insulated case of the merchant in one part of the town, carried this destructive flame on the same day, first to the painter resident in another part of St. Petersburg, and on every successive day to a hundred more patients, living in different and distant quarters, until it had overtaken, with unerring course, 1200 inhabitants, and destroyed nearly the half of that number? Where are the links of this mighty and fearful chain? What has connected the Alpha to the Omega of this dreadful alphabet of names through its intermediate letters? Did the patients themselves, as soon as they were stricken with the disorder, leap out of their dwellings, and by touching the unsuspecting passengers, or by shaking their garments over them, as they progressed through the well-ventilated, wide, and cleanly streets of the imperial residence, inflicted upon the healthy the terrible malady by which they were tormented? Or did the charitable philanthropist, or the physician, or the victualler, carry the disease (themselves unhurt!) to every corner of the city? But the very idea is ab-

surd; the physical time would be wanting even for the execution of such absurdities. Well may Dr. Lefevre, a very able physician practising in St. Petersburg, who has just published a work on cholera, as it appeared in that capital, observe, "When upon inquiry it was found that within the space of three days the disease broke out in a dozen parts of the town, widely separated from each other, the supporters of contagion awaited further evidence, and the *anti-contagionists increased with the increase of the disease.*" The same train of reasoning, founded on similar facts, connected with the appearance of the disease in Berlin and Vienna, will suggest itself on perusing the history and official reports of their respective epidemics, during the last six months. But at Berlin, the singular precision with which its progress has been statistically watched, and made the subject of calculation, has left no room for the admission of the doctrine of the alarmists and contagionists, and proves the epidemic nature of the disorder.

Q. Do you happen to have by you the summary of those calculations?

A. I have. It appears that in September last, 893 persons were attacked by the severe form of cholera well known in Europe. Of these 768 remained in their own habitation, and 125 were sent to the hospitals. The number of houses in which the disease appeared amounted to 409 in 273, of which *one* individual only was attacked, while in the remaining 136 houses, 620 were attacked, giving a rate of between four and five individuals attacked in each house. On the other hand we are told, that from the most accurate enumeration, it appeared that the 409 houses in which the 893 cases of disease appeared during that month, were inhabited by 4200 families, which give a population of 16,800 persons, assuming that each family was composed of four individuals. This large number of individuals, then, was brought into direct communication with the disease; and yet, notwithstanding a circumstance so singularly favourable to the development and progress of contagion, scarcely more than one person in eighteen was affected by the disease. But then the contagionists will tell you that the one person is the rule, and the seventeen who

escaped, the exception, because they were insusceptible!

Q. You can probably pursue this argument still further, or add some other fact in illustration of it?

A. Nothing so easy. The difficulty is where to stop with the facts, or how to make a selection out of such a vast mass of them. And it is worthy of remark, that all those facts which the anti-contagionists in cholera bring forward to support their opinion are connected with large masses of evidence, and not on insulated and single occurrences, to which most of the argumentative facts of the choleric contagionists refer. Here is another example, you are aware that Hungary was afflicted with cholera most extensively during the last summer. The journals of that portion of the Austrian dominions of the 20th of last month (October) state that according to official reports made to the government, in the space of four months cholera had appeared in 2962 different places, attacking 333,711 individuals, of whom 151,020 had recovered, 151,734 had died, and 32,957 were still alive when the reports were made up.

In the course of the same period of time the disease had entirely ceased, within an average space of eight weeks, in 1001 places, and had appeared in 125 other places. Is this to be explained by the contagionists? If coercive measures and restraint were used by the authorities of the country to prevent the spreading of the supposed contagion, when it first appeared in a few places, how came it to show itself in nearly three thousand places besides? and if the contagionists contend that the sanatory and restrictive regulations were badly enforced, wherefore has the disease stopped short of three thousand places, and not gone on unchecked to all intermediate and other villages, towns, and hamlets of that vast kingdom? Why, I would again ask, did it cease within a short space of time in one thousand places, long before the hundredth part of their population had been destroyed by contagion, unchecked by any efficient measure of precaution? Do not these circumstances, together with the singular coincidence of the disorder having shown itself almost simultaneously in the majority of the

three thousand places, tend to show that the disease is of a terrestro-aerial origin, and demonstrate the inexplicability and improbability of an opposite doctrine, or that which would convey the disease from place to place by means of a specific poison conveyed by men and goods?

Q. It has always struck me as very remarkable that this disorder, if it be the offspring of contagion, and not of some other phenomenon which prevails its destined time and then dies away, should stop at all in its course as long as there are victims in the places in which it was introduced. So far from this, however, being the case, we find that only a very small majority of the population has ever been affected. Is it not so?

A. Doubtless it is. There is a curious table, published by authority at Berlin, which exhibits this very point in its true colour. The table in question shows the relative proportion of persons attacked by cholera in the principal places in which that disorder has prevailed, and the calculation extends to fifty-two days, the average period of the duration

of the disease from its first appearance. That proportion stands thus:—Out of every thousand inhabitants there were affected by the disease at

Lemberg	53½	Konigsberg	12
Mittau	35	Elbing	10
Riga	31	Dantzic	9
Posen	17	Stetting	5½
St. Petersburg	13	Berlin	4¼

Q. Why this being the case, the proportion of those who took the supposed contagion to which the whole town was equally exposed, bore a very insignificant proportion to those who escaped unhurt?

A. Truly so. And when you inquire of those who insist upon that the cholera is contagious and communicated by man to man, to explain this singular fact, they tell you that it can easily be explained by supposing that those who escaped were not susceptible of catching it. So that at St. Petersburg for instance, where only one-eightieth part of the whole population was affected by cholera, seventy-nine eightieths of it must have been

insusceptible of the disease according to the choleric contagionists; who in this case again would have us believe, that by far the largest number of events form the exception, and the very smallest number the general rule.

Q. And yet from the rapidity with which this disease extends to individuals in the first week or two of its appearance, which (in the case of St. Petersburg, as stated by yourself on the faith of official documents) was such, that the first case was multiplied into 1200 in the course of a fortnight—it would be more consonant with the doctrine of probabilities, as well as of true contagion, if a disorder so communicated amidst the breathing population of a large town, should affect the larger majority of them and not the smallest minority. Do you not agree with me on that point?

A. Impossible to deny it. In fact there are two great general laws, which have invariably been observed in this epidemic disorder of severe cholera, and which the contagionists cannot get over, much less explain by their doctrine. The one is the simultaneous appearance of the disorder in a hundred different parts of the same town, and among

several hundred individuals, and that in the course of a few days only—the other, its uniform cessation after a few weeks duration, and when only a small fraction of the population has been affected by it. If the latter does not of itself disprove the contagiousness of the disorder, it at all events affords the consolation of knowing that only a very insignificant proportion of us in London can become affected with cholera. How different are the laws of invasion and cessation in truly contagious diseases, communicable from man to man by goods, and how much more formidable their results! Let us take the nearest example of plague being imported in a part of the British dominions, I mean Malta, in illustration of the assertion; and it will be found that the disease, which began in two individuals arrived from Egypt, who died on the 7th of April, 1813, did not produce a second case until nine days after, from intercourse with the two first. Two more cases were added next, but not until the expiration of seventeen days more, being the 3d and 4th of May. On the 5th of that month the nature of the disease was publicly proclaimed by the go-

vernment, and from that time until the 19th, the progress of the disease was so slow, that doubts were entertained whether it was really the plague which had been introduced. Still it was proceeding, and proceeding insidiously, through the widening communication of relatives and attendants, until it at last reached that degree of intensity, which caused the destruction of the twentieth part of the whole population of the island in the space, not of six or eight weeks, or of two or three months, but of seven months; nor would it have ceased, except for want of victims, had it not been for the most vigorous and coercive measures of Sir Thomas Maitland, such as never fail of success when employed in checking truly contagious disorders.

Q. Verily, one must be a blind worshipper of preconceived opinions to believe in the contagious nature of cholera, after such striking facts, which show a totally different mode of propagation in that disorder. Have not all these facts made an impression on the contagionists and the Board of Health?

A. Virtually they have; for in addition to such facts, and many hundred more, there

have been several very deliberate declarations of the Austrian, Prussian, and Russian governments, respecting the non-transmissibility of the disease by goods and merchandise; and the inutility of coercive sanitary laws, which have staggered our Board and their supporters. But they seem unwilling to make a candid and full confession of their error; and they have only within the last few days given up fumigation, and the quarantine upon goods. They must, however, sooner or later, admit the whole truth and declare it; and, as I observed on a recent occasion, in addressing a large public meeting of medical gentlemen, “the cholera-contagionists have wonderfully leaped from their assertions—they have nearly met their opponents half-way this evening—and by the time of our next meeting (Saturday next) they will altogether surrender their erroneous notions, and admit, that we who consider cholera—mild or severe in its form, no matter—to be nothing but an epidemic disorder, of home growth, and not communicable from man to man, are right.”*

* A few days after this part of my statement was

Q. Your view of the whole question is infinitely more consoling than that which had hitherto been taken by the would-be leaders of public opinion on the present occasion, and must, so far, be of service, as it will tend to restore that courage to the inhabitants of these realms which you state to be essential in our endeavours to resist the influence of epidemic diseases. But may it not lead, also, to a relaxation of that vigilance and attention to cleanliness and temperance on the part of the industrious classes of the community,

sent to the press, and five days after the statement was made by myself in public, I had the satisfaction of seeing my prophecy verified. The old Board of Health, to whose declarations and erroneous opinions the present panic is due, has been dismissed and a new *Central* Board of Health established instead. These gentlemen seem to enter on the execution of their duties with sounder notions, and among the recorded proceedings of their first meeting, it is delightful to find them speaking out thus: "It is with much satisfaction that the Board feel themselves authorized to declare, and it will no doubt be highly consolatory to the public to learn, that under proper observances of cleanliness and ventilations, this disease seldom spreads in families, and *rarely passes to those about the sick,*" &c. &c. And in another place, the new Board goes on strongly to deprecate all the measures of coercion for separating the sick from the healthy, which the old Board and the *Quarterly Review* had as strongly inculcated.—(See *Times*, 17 Nov. 1831.)

which are equally necessary to preserve them from the effects of the disease ?

A. You will shortly see that such cannot be the result of a consoling view taken of a prevailing epidemic, which has the great merit of being true, and of coming home to the understanding of every one ; because, in adopting that view we must also adopt the precepts and directions by which it is accompanied, and which will form the subject of the next and concluding sections. On the other hand, consider the baneful effects produced by the erroneous notions of the advocates of contagion, and the regulations which they have issued in consequence, together with their appalling picture of the character of a malady which they have armed (instead of disarming it) with additional mischief and increased terror. Good God ! is it come to this, that we are to desert our relatives and friends, leaving them in charge of some aged, feeble, or drunken hireling, to save ourselves from a supposed contamination ! And even by such an act of selfishness and disregard of the dearest ties, how can the propagation of the disease be impeded, supposing it to be contagious ? Are

there not the inspectors, the servants, the medical attendants, the nurses, the victuallers, the people employed in carrying and burying the dead, who can all become in their turn contaminated, and consequently contaminators in their intercourse with their own families? The whole thing is unworthy of minds, otherwise highly educated, and eminently qualified as physicians, to treat diseases with which they are well acquainted, and which tend not to warp their judgment by the terror they inspire.

THIRD SECTION.

THE NATURE OF CHOLERA, ITS CURE AND
PREVENTION.

Q. As your professed object in the present part of your work is to offer to the public a plain and popular statement of what is considered important, and no more, respecting cholera—you will not, I suppose, enter into any minute details of the many medical theories by which the nature of the disease has been attempted to be explained?

A. I certainly have no such intention. Were I addressing myself to the medical profession, I should think it my duty to speak more at large and scientifically on the nature of cholera, its remote and its immediate causes, its permanent and its erratic or anomalous symptoms, and lastly of its treatment. But I write for the multitude, and they stand in need only of plain facts and plain directions.

Q. You have already given a general and

rapid sketch of the severer form of cholera—quite sufficient, no doubt, for the purpose of putting people on their guard, without exciting fear. Should you feel disposed to favour us with a more detailed and specific account and description of that malady?

A. I think it more prudent to decline doing so; for (as I before observed) writing as I do for the many, who, if attacked by the first symptoms of the disease, would have a sufficient warning to induce them either to adopt the easy measures recommended for their immediate relief, or to send for a medical attendant; any further account of the subsequent and more distressing signs of this painful disorder would but disturb their mind while labouring under it, without affording them better means, in their hapless condition, of benefit by such heart-rending recollections. Of what use, think you, has been the long, minute, and highly-coloured description of the origin, progress, and fatal termination of cholera, published in a cheap form by the old Board of Health, and put into the hands of every class of persons in the community—but to excite alarm now, and prepare future re-

collections and dreams of terror during the disease, for the unfortunate individuals who are destined to be attacked by it !

Q. Most truly observed. The terror excited by the defunct Board could only have been equalled by that which the inhabitants of London must have felt during the ravages of the plague, or the universal conflagration of their city. I have witnessed the keen distress occasioned by the account of the disorder given by that Board, among several families ; and I conclude that such a condition of the mind would, sooner or later, dispose us to become affected by *any* disease.

A. Dr. Lefevre states in his work, that “ of all causes which predisposed to the disease (cholera), moral affections were found the most frequent, and their baneful effects were not merely contrived to render their victims more susceptible of the malady, but they produced a decidedly fatal influence on the constitution itself. That many died of fright was a phrase re-echoed by every medical man in the city (St. Petersburg), and fear may, consequently, be considered as the chief predisposing cause.” If such be the opinion of the

experienced, what have not the members of the late Board and the writer in the Quarterly Review to answer for, when they sounded the tocsin of alarm, branded the poor patient with the black mark of contamination, condemned him to be dragged out of the dwelling of his fathers in order to be consigned to a lazaretto, threatened to employ coercive measures to enforce the separation of the sick from the healthy members of a family, and subjected every house in the country to domiciliary visits by strangers, under the pretext of inquiry into the existence or non-existence of a disease, in order forthwith to proceed to violent measures *for the safety of the State!*

Q. According to your view of the case, therefore, you would rather acquaint me with so much of the character of the disease as will enable us, who are unskilled in physic, to understand when we are stricken with the disease, what to do at the very onset, leaving all that is to follow to the care of a medical attendant? This is the more necessary, as I suppose that very little doubt exists but that cholera, which in its severer form has shown itself in Sunderland, will go on augmenting,

and spring up, likewise, in many other places, including the metropolis?

A. Just so. Nothing but the most unlooked for circumstances can now prevent the appearance of this epidemic disorder among us. It is even now forming in England, and will show itself with more or less severity than it has done in Berlin or at St. Petersburg. It will go through its more usual course of eight or ten weeks' duration, and subside quietly, long after the public in general shall have ceased to feel any interest in its progress.

Q. To which of the symptoms would you wish to direct my attention?

A. The symptoms of severe and dangerous cholera concern, 1st. the head, 2d. the stomach and bowels, 3d. the muscles in general, 4th. the heart and arteries, 5th. the chest. To the three first series of symptoms, then, would I wish to direct your attention, because they are, in reality, the distinguishing symptoms of this particular disorder. The two last series of symptoms, namely, those which concern the heart and arteries and the chest, may, or may not, be present in the disease. At all events, they are

symptoms which may, and do often, accompany other diseases, whereas the three first series belong only to cholera.

Q. What are the symptoms which concern the head ?

A. Giddiness, or a sudden sharp pain of momentary duration, dizziness before the eyes, or dimness of vision, noise and singing in the ear. One, two, or more of these symptoms, are present and mark the outset of the attack. The last mentioned symptom never fails in cases of severe cholera.

Q. Which symptoms are referrible to the stomach and bowels ?

A. Nausea, followed by vomiting, with a sensation resembling that of sea-sickness, great heat at the pit of the stomach, intense thirst, heartburn, and purging. The matter ejected, when not altered by the mixture of food or medicine, is of a greenish cast, sometimes of a dirty white, like water-gruel, slimy, or mucous; at other times it has the appearance of coffee grounds; and in few cases, it is pure bile which is vomited, as in the case of the more common species of cholera

Q. The third series of symptoms is that which has reference to the muscles in general: will you describe them?

A. Readily. A tremulous motion of one or two fingers, or of the fleshy part between the thumb and forefinger, and twitching of the muscles of the chest, have given warning of an attack which, when begun, was accompanied by severe cramps, beginning in the fingers and toes, and extending to the arms and the lower part of the chest, as well as to the calves of the legs, thighs, and belly. After a little duration of the cramp, pain comes on with increased oppression and constriction about the stomach.

Q. There are several other symptoms which remain to be described, such, for instance, as concern the state of the pulse, the beating of the heart, the nature of respiration, the quality and quantity of the secretion from the kidneys, and the condition and colour of the skin, the degree of depression and exhaustion that may or may not exist, with many others mentioned by authors which have treated of this disease, but which, I presume, you will not descant

upon, because they are, properly speaking, the province of the physician, for whose guidance you write not?

A. Just so. Those are the symptoms that mark an attack of cholera in its incipient state, which I have described. They are quite sufficient to put the patient on his guard, to proceed, of his own accord, or by the assistance of friends, to do that which will afford him ease and the chance of cure to be presently described: as for the rest, he should not trouble his head about it, but forthwith send for his medical adviser, or any other near at hand.

Q. Have you formed an idea, from the contemplation of these symptoms, and of those still more important (in a medical point of view) which you left untold, as to the nature of the disease, I mean as to what it consists in, or what are its immediate causes?

A. I have. Cholera consists in an affection of the nerves, so violent as to disturb all those parts and functions with which the influence of nerves is the superintending agent. This affection of the nerves being of a spasmodic (crampy) kind, *contraction* is the ne-

cessary consequence of it. Thus we have first, among the symptoms affecting the head, sharp pain of momentary duration, resembling that of *tic* producing *tightness* in the head ; and the noise and singing in the ears seem also the effect of convulsive contractions of the passage of sound. Secondly, among the symptoms of the stomach and bowels, we find pain, *constrictions* and convulsive contraction of the stomach and bowels, producing vomiting and purging. The same contraction shuts up the channels of the bile, and those of the kidneys. Thirdly, among the symptoms which are referrible to the muscles the same phenomenon of contraction is strongly marked, producing acute pain. This application of my view of cholera might be extended to the remaining symptoms with equal justice, and would be found to tally with them with striking accuracy.

Q. What functions, or operations performed by the parts which you have demonstrated to be nervously and spasmodically affected, and afterwards *contracted*, are disturbed in cholera ?

A. First, *the circulation of the blood*, in consequence of the spasmodic and alternate con-

tractions of the heart and arteries; hence their motion is found nearly to cease during an attack of severe cholera, and the pulse becomes altogether imperceptible at the wrists as well as in the temples. Secondly, the *secretion* or *formation* of the different fluids in the body, in consequence of the contraction of the channels and vessels by which those operations are performed. Thirdly, the *digestion of food*, in consequence of the spasmodic contraction of the stomach and bowels.

Q. And what may be the mighty and PRIMARY cause which can give rise to such wonderful and fearful effects, *through the agency of the nervous system morbidly affected?*

A. A peculiar state, condition, and modification of the atmosphere we live in; a congeries of meteorological phenomena referrible to the air and to the soil we dwell upon; in fact, a blight, a poison, an obnoxious something which is formed round about us—how, we know not—and which, moving with the atmosphere and spreading itself to different extents within it, shows its hostility to the human constitution whenever this is exposed to its direct and continued influence. A

respectable officer, high in rank, who served in India, assured me that, while marching with his regiment in a particular direction, it had often happened to him to be told that the soldiers at the head of his column had been attacked with cholera: upon which he invariably altered the line of march, sending some to the right and some to the left of the road they formerly occupied, and the disease no longer appeared among the soldiers. Mr. Pettigrew, in his pamphlet on cholera, has instanced a skilful manœuvre of the Marquis of Hastings while in India, by which he put an end to the devastation produced by cholera among his troops, and which consisted in moving the troops fifty miles only from the spot they occupied, to another where the soil was *dry* and *elevated*.

Q. What think you is the immediate effect of this poisonous influence of the atmosphere upon our constitutions?

A. Excessive proneness to indigestion, with the formation of an acid of the most pungent and deleterious nature, probably nearly allied to muriatic acid, giving rise to the affection of the nerves I have before mentioned.

Q. You mean to say, that while the physical causes you have alluded to shall continue to prevail, our stomachs will be considerably more liable to be disturbed in their functions, and to generate a particular strong acid, which you imagine to be something like muriatic acid?

A. Exactly so.

Q. Have you any positive proofs of such being the fact?

A. None but inferential. Unfortunately chemistry has not yet lent its aid to this inquiry; but we infer that acid is present in the stomach, in this complaint, from the observations of the patients when they have vomited, and we draw the same inference from the universally admitted fact, that when alkalies, such as magnesia, bismuth, sal volatile, and ammonia, have been given, they have produced the greatest share of relief in this disorder. And, lastly, we infer that a peculiarly pungent acid is present in the stomach, because the severe symptoms which I have enumerated, as arising from a specific affection of the nerves in this malady, are such as we find in cases where strong acids have been taken into the stomach in too large a dose,

producing cramps, vomiting, purging, heat and pain at the pit of the stomach, exactly as they occur in cholera.

Q. Would this view explain also the coagulation of the blood observed in the heart and large vessels, and the strong marks of inflammation observed after death inside the stomach and bowels?

A. Unquestionably it would.

Q. Now, setting aside altogether this view of the disease, what is the treatment which your reading and experience have suggested to you, as the most effectual and likely to be successful?

A. I shall limit my answer to that question, to the suggestion of such measures as may and ought to be quickly adopted by the patient himself or his friends before a medical man can be procured. To do more, in a work of this kind, would lead to error. I premise my suggestion by stating that I place not the slightest faith in your Cajeput oil, camphor, oil of peppermint, or cinnamon—your pure stimulants, and all the cholera drugs which the late Board of Health have suddenly raised into notoriety by their recommendation,

and through notoriety into a high price, which has proved the means of making the fortunes of some score of druggists. That which I recommend is simple, cheap, and I trust will be found intelligible as well as easy of execution. On its being ascertained, from the symptoms detailed in this work, that an individual has been attacked by cholera, let a wine-glassful of hot water, with twenty of the "stimulating alkaline drops" of which I have left the prescription with a highly respectable chemist in London,* and thirty drops of laudanum, be given. This is to be repeated every twenty minutes, until some relief or the cessation of vomiting takes place. In the intervals, if great thirst exist, and prostration of strength, with very cold skin and clamminess, large draughts of water, as warm as can be swallowed, with one-fifth part of brandy, should be drunk. This will be found to quench thirst sooner than cold water, and will assist materially in producing a warm perspiration. But as the latter is the next important object to be obtained, and should be secured to the patient

* Mr. Garden of Oxford-street.

without any loss of time, reliance must not be placed alone on the hot brandy and water drunk, nor on the “stimulating alkaline drops” taken along with it; although they are also a powerful sudorific, at the same time that they safely stimulate the system, and neutralize any acid, present in the stomach, with a rapidity scarcely to be believed by those who have not witnessed its effects. Other means must therefore be adopted to produce perspiration at all events, and that quickly too; and as in the choice of these we are much limited by the necessity of keeping the patient quiet in the horizontal position, our endeavours should be directed to the application of heat with a little moisture to the body. For this purpose I recommend a couple of bushels of bran, boiled rapidly in very little water in a copper or large saucepan or earthen vessel over a brisk fire, drained through a flannel, and very thickly scattered all over the chest and belly of the patient, sides and all. This is to be retained in its place by bringing the two sides of a blanket, on which I suppose the patient to be lying, over the belly, and fastening them tight in

that position. This process will produce, in a very few minutes, the most copious and warm perspiration. The refuse grains of malt or oats, similarly boiled, will answer the same purpose where bran is not at hand. I have no faith in the portable vapour-baths, the steam of water thrown up under the bed-clothes, or the lighting of a spirit-lamp, placed similarly, which have been recommended. I have often and long ago tried all these means in cases of puerperal fever and acute rheumatism, and in one remarkable instance of the latter disease, in my own case, but found them totally inadequate to the object in view, and many of them quite inefficient. Let not the public, therefore, be misled on this point. As for sand-bags and bags of salt, as mentioned in the circular of the former Board, they are perfectly inactive, besides being troublesome, because of the great number that is required of them and the time lost in preparing them.

Q. It is well you mention these facts, else some severe disappointments might ensue when the disorder is amongst us. Happily, your mode of fomenting and producing perspiration is much handier than any vapour

baths, and must be more comfortable to the patient. Is there any other step which ought to be taken at this important conjuncture?

A. Yes. While the warm applications are proceeding and the internal medicines given, a degree of revulsion should be produced by rapidly promoted counter-irritation on the skin. This will be found to give impetus to the circulation, and thereby to ease the tumult existing in the centre of the body. The counter-irritation should be applied to the thighs and to the upper part, not to the soles, as recommended, of the feet. There are a great many counter-irritants, or agents, which produce irritation on the surface of the body, that have been recommended in this disease (for the principle is generally adopted by all of us); but some are objectionable, and most of them too slow in their operation; and here we have no time to lose. A common blister is too slow; a mustard poultice, besides being slow, is inefficient. Tartarized antimony ointment is out of the question. Nitric acid, and even a liniment with vitriolic acid, have been recommended and employed: but these char the skin, and form

eschars, which are, so far, a check, rather than an encouragement, to rapid counter-irritation. Some practitioners, fully aware of the great importance of raising a blister on the surface of the body quickly, have actually poured boiling water on the belly in the treatment of cholera; but this is a cruel method, and liable to much consequent mischief. As to camphor and turpentine liniments, we might as well amuse ourselves in blowing cold air on the limbs of the patient. The effect to be produced must be rapid, permanent, available, and general in its influence on the constitution. I have been fortunate enough to devise an embrocation or lotion, consisting of three stimulating ingredients, of which I have now had an experience of three years, and which answers to all the above requisites; for besides relieving muscular and nervous pain in five minutes, it will produce an active degree of inflammation of the skin in half that time, and a blister, fit to be pierced and dressed in the usual manner after the evacuation of the fluid, in little more than eight or ten minutes. This lotion, then, is to be applied by means of compresses of linen,

or two or three folds of old flannel, to the inside of the thighs and the upper part of the feet, retaining the said compresses in their places by means of a dry towel pressed down firmly by the hand during the whole time of their application, when the desired effect will certainly be produced. If, after reaction has begun in the system, pain or tenderness exist in the abdomen, an application of the same lotion to produce either simple counter-irritation, or a blister will forward the recovery. The same lotion will be found additionally beneficial should the patient be in a state of great languor, heaviness, or stupor, which are symptoms often occurring in the first attack of cholera; for, by its almost painful impression on the parts to which it is applied, the system is roused to a wonderful degree of action. I have seen a child two years old which had been labouring under pressure in the head in a case of brain fever for two days, roused and benefited in less than a few minutes by the application of this lotion to the nape of the neck, where in that short period it caused a blister, which healed most kindly—as such blisters do on all occasions.

Q. Do you not recommend bleeding in the early stages ?

A. I do ; but the point is one of nice discrimination. If, while the measures which I have proposed are in progress, the pulse becomes perceptible and gradually fuller ; if the hot bran has succeeded in bringing on an excited state of the skin and a warm perspiration, showing that an improved state of the circulation has taken place ; if the counter-irritation on the limbs has been successfully applied, and local inflammation established as a revulsive against the inward disorder ; if, in one word, there has been what is called a *reaction* in the system—then I would use the lancet to secure the recovery. Besides the more ordinary modes of taking blood from the patient labouring under cholera, in which the large blood-vessels of the abdomen are distended with half congealed or treacle-like blood, I recommend the trial of leeches to the hemorrhoidal vessels in pretty large numbers, and bleeding from some of the larger veins in the lower or middle part of the thighs. But this point, as well as the propriety and choice of purgative medicines to be given when the vomiting and

the spasms have greatly diminished, and lastly all other means that may be required in the progress of the disease, I must leave to the medical attendant to determine. My task, in a work of this kind, ends where that of the medical man begins. It was my object to enable people to help themselves, while those who are afterwards to help them are sent for, and to tell them in plain language and by means easily attainable, how to profit of the time which must elapse before any assistance can be procured; a time, alas! too precious to be lost—as it frequently happens in the epidemic cholera that the loss of the first hour or two, without doing any thing, has been fatal to the patient. Bran—laudanum—brandy—a bottle of the alkaline drops, and another of the counter-irritating lotion, are not cumbersome nor difficult to be procured, and may be supposed to be constantly ready at hand, on such an eventful occasion.

FOURTH SECTION.

PREVENTION AND PRECAUTIONS.

Q. How should we live in order to preserve ourselves from cholera, and by what means can we hope to escape its attack?

A. My reply will embrace two series of suggestions calculated to promote the objects embraced by your question. The first will be applicable to each particular individual, and point out the conduct he ought to pursue, in order to preserve himself from an attack of the disease. The second will refer to the community at large, and detail such measures as are best adapted to check the disorder when once it has made its appearance amongst us.

Q. What are the suggestions which you consider as applicable to individuals?

A. They are such as relate to their diet, their clothing, their general and particular mode of living, their passions, and the use of preventive medicines.

Q. Detail those which relate to the diet?

A. It has been unanimously stated by all the medical practitioners who have seen the severe form of cholera, that irregularity of living, that imprudence in diet, and excesses of the table, as well as deficient, neglected, or low diet, disposed people to be attacked by the prevailing disease. It is notorious that imprudence in diet is capable of producing, under common circumstances, any ordinary bowel-complaint, and that the same cause has given rise to the more common form of cholera in the summer, or at the close of the autumn, in most countries in Europe; it is therefore reasonable to suppose, that an attack of the more aggravated form of cholera, will be greatly facilitated by the same cause. For example: it was observed in India that the natives who mostly live on a vegetable and spare diet, were sooner attacked by the epidemic, and died in greater numbers. Dr. Lefevre has made the same remark with regard to the lower classes of Russians, whose fare is at all times hard, and much less nutritious than that of English peasants. On the other hand, it has been remarked, at Moscow and

at Riga, that any great feast or holiday which brought the lower orders together, to indulge in the common vice of guzzling and intoxication, was invariably followed by a marked increase in the list of patients the ensuing day. After the celebration of the church festival of Pentecost, at Riga, in June last, the number of those who were attacked by cholera the following day, was 148, although the daily number of patients had just before got as low as fifty-five only.

Q. Am I to understand, therefore, that the best diet in such a conjuncture is one which shall be neither too low, nor too generous?

A. Precisely so; bearing in mind that one of the best preservatives against the disease, has been found to be a dry, concentrated, and invigorating diet. Among the English inhabitants of all classes at St. Petersburg, of whom there are more than 2000, only thirteen died during the prevalence of the disease—a circumstance which must, in a great measure, be attributed to their better mode of living.

Q. Be pleased to specify a little further the different points of this part of your suggestions?

A. During the prevalence of cholera or while the disease is expected to show itself amongst us, never leave home in the morning with an empty stomach. Mr. Searle who lived unscarred by the disease in the very heart of its scene of desolation in Poland, took a cup of coffee with or without a tea-spoonful of brandy in it, and a biscuit, when he sallied forth too early for breakfast. He also recommended a light supper to those who dined early, with a little of very diluted brandy, and early retiring to bed. The breakfast and dinner should consist of nutritious food eaten in moderate quantities. All slops as well as superfluities should be avoided. Undressed vegetables, unripe fruit, and at this particular season I should add, all sorts of fruit, especially pears and apples, cold liquids, such as soda water, weak malt liquors, public-house porter, Rhenish and light French wines, are likely to be very pernicious. The best beverage for dinner is a tumbler of very warm water with two glasses of the best and oldest sherry wine, sweetened with a little sugar, and made aromatic by the infusion of two or three cloves in it. In fact, we should attend with

strict precision to the rules I have laid down in the body of the present work, respecting diet, with the exception of a somewhat more liberal allowance of wine, than therein mentioned, and the admission of very diluted warm brandy.

Q. What directions can you give as to clothing?

A. The first is to wear a large piece of flannel next to the skin, over the belly, by day; not because there is any specific virtue in this measure, but because that part of the body more especially should be kept warm. More bowel-complaints occur, in my opinion, in this country from cold affecting the belly, than people seem aware of. A wash-leather waistcoat with sleeves over the shirt, and such other clothing as will keep the body comfortably warm are recommended. Woollen socks should be worn on the feet, and when these, by any chance, get wet in walking, they should be stripped of their coverings immediately, and rubbed by the fire. This is a most important point. The sum total of our clothes out of doors should be so arranged, that we may be able to throw off, in cold weather, a good portion of them when

in doors. At night never go out without having something additional round the neck—and in bed be careful to have your feet rather too warm than at all cold. Recollect that the attack generally comes on at night. If the surface of the stomach feels cold to the touch when you get into bed, or wake in the night, apply hot cloths or flannels to it immediately. Attend to the cleanliness of every part of the body with more than usual care, and in so doing use nothing but warm water. Change your body linen and that of your bed as often as your circumstances will permit.

Q. The next subject for your suggestions, you said, is the general and particular mode of living: have you any especial observation to make upon it?

A. I have; and though they may at any other time appear frivolous, they are not to be disregarded on occasions of the prevalence of an epidemic disorder. I would say, therefore, that our mode of living, or regimen, as it is called by the learned, should be regular and methodical, even to monotony. By leaving no step of our daily life to be directed by chance; but, on the contrary, by directing

every step methodically, we shall run no risk of finding ourselves, when we least expected it, in some dangerous scrape. Thus for example, if we have not made up our mind to retire to our homes early every night, after our respective occupations of the day have ceased, and of keeping to our apartments, uniformly warmed, until we go to bed; but, instead of this regularity, we leave it to chance, whether we are invited out to dinner-parties, or shall visit the theatres, how are we certain that with all our precaution, we may not be constrained into a situation of danger, either by the temptation of good things at a table—by being placed in a situation where the wind blows upon us, and which we cannot alter—by getting wet because no vehicle is to be found, and sundry other chances of equal risk? Therefore, I repeat, in times of epidemic disorders, and particularly when such a disorder as cholera is threatening us, make your mind up to be systematical in all you do, and in the division of your hours and occupations. Rise early—devote an hour to personal cleanliness—take your breakfast and sally forth for a walk, or proceed to your morning occupation—eat an early dinner, at

two or three o'clock—again take some exercise on foot—return for your evening meal early—and after having enjoyed the society of your family circle, or the luxury of reading and study, get into a comfortable bed, and court sleep. I observe many ladies, some without, but many more with children, going about town in open carriages, even as late as six and seven o'clock in the evening, at this season of the year. Let me tell those persons that they will rue such a practice by and by. It is pregnant with danger just now. Avoid crowded rooms—keep clear of bad smells—save yourself from fatigue; if you are obliged to be for a time in low, dirty, and ill ventilated places, keep a smelling-bottle under your nose containing some liquid chloride of lime. Occupy the upper floor of the house for your bed-room and let your bed be so situated, that it may be readily ventilated. Snug corners and alcoves are bad situations for your beds. In walking, riding, or standing still, take care to place yourself always to windward, or select such situations as are protected by buildings from the wind.

Q. Have you much to say on the subject

of passions, as connected with our preservation from cholera ?

A. Very little that I have not already mentioned in more than one part of this work. Fear, I have stated, has proved at all times, but more particularly during the prevalence of cholera, a fruitful predisposing cause of disease; be firm, therefore, and confident. Cheerfulness of disposition, equanimity and serenity of mind, are essential means of preservation from epidemic disorders, cholera especially. You have now the consoling assurance of the New Board of Health, in confirmation of what we, the anti-contagionists, in regard to cholera, had long before declared and contended for, that the disease *does not pass to those about the sick*, and seldom spreads in families. Cholera, therefore, is thus disarmed of one of its worst terrors. You only run the average share of risk of one in 1,200,000 individual inhabitants of the metropolis, of being affected by the epidemic influence of the atmosphere, while that influence lasts; and as you are put in possession of several means to counteract that influence, the chances are greatly in your favour that you will not be

attacked by cholera at all. To this conclusion I am authorized to come by my experience, which has been very considerable, and my observations, in more than one general epidemic,* and by what I have read in all the authors (twenty or thirty of them) who have treated of cholera. But this encouraging view of cholera will, in my humble opinion, be still more improved, and in the majority of cases made a matter of certainty, if we use a few of the medical means which I will venture to propose.

Q. What means are those ?

A. The first refers to the state of the bowels. On this subject, I am sorry to differ from the present Board of Health, who in every respect deserve great credit for having issued a proper code of regulations in the present emergency. They state that moderately *costive* bowels

* Monsieur Moreau de Jonnés, whose work on cholera has been much commended by the contagionists, and I think justly, as far as industry and erudition are concerned, but not in regard to his doctrine of contagion in that disease, did me the honour of stating in a Report read to the Institute of France, in August, 1825, that—
“ Le Docteur Granville, dans mon opinion est l'un des médecins de l'Europe les plus instruits dans la connaissance des phénomènes des contagions et dans celle des moyens employés pour en combattre le fléau.”

are conducive to exemption from cholera. More so, I dare say, than relaxed bowels; but much less so than when the bowels produce poultaceous evacuations, which is the precise state they ought to be kept in by means of pills, consisting of small proportions of rhubarb, extract of jalap, and bitter apple, mixed up with essential oil of carraway or cloves. Even moderately costive bowels require an effort, which fatigues the muscles of the abdomen, when occurring daily, and lastly, soreness of the lining of the abdomen, as those well know who have habitual *costive* bowels, and cannot bear pressure on the belly without some degree of pain. Ginger tea with magnesia, and some of the warm purgative tinctures will be proper substitutes for the pills, where the latter are not preferred. The stimulants, whether solid or liquid, and the tonics which have been offered to the public in the thousand advertisements that have inundated the daily papers since the recommendation of the defunct Board of Health, by recommending those drugs, gave a sort of sanction to such advertisements—are as many two-edged tools put into the hands of unskilful and ignorant workmen. I perfectly

agree with the new Board, that *drugging* is to be deprecated at all times; and more so when epidemic disease is apprehended: but, as I before stated in the sixteenth chapter of the first part of this work, if the prevailing disease be dependent on a disturbance of certain functions, which any particular preparation of drugs is calculated to preserve intact—the taking of such a preparation must be beneficial. Cholera, I firmly believe, owes much of the facility with which it makes its attack on individuals to the presence of acid in the stomach, which is neutralized by alkalies, as most authors on cholera have reported, and all those German practitioners have admitted who have administered magnesia, bismuth, and heartshorn in the disease with success. The moderate use, therefore, of alkaline medicines daily taken must be of service, and I fully expect will rank among the best preservatives, by keeping the stomach, at night in particular (the most general time for an attack of cholera), free from the presence of such acids. The great point in choosing from among the alkaline medicines which we mean to use, is to select one which shall be easily taken, which may be taken in a small compass,

which shall be rapid in its effect of destroying the morbid agent in the stomach, and which shall impart tone to that organ and energy to to the circulation—neither magnesia, nor bismuth possess all these requisites, though excellent in themselves. Heartshorn or sal-volatile, or carbonate of ammonia is preferable, but not, I think, sufficiently energetic, and permanent in the effect. These considerations have led me to think that the “alkaline drops,” which I mentioned in speaking of the treatment of cholera in another part of this work, would answer all the purposes above stated, and I was induced to think so by the extensive experience I have had respecting their use in cases of common indigestion and acidity of the stomach. Accordingly, I lost no time in recommending all those, among my acquaintances who have asked me for instruction how to act in case the cholera should appear in England, (and what person has not put the same question to his medical attendant by this time?) to take, as a preservative from one of the most prolific causes of cholera, acidity and want of tone of the stomach, ten of the “stimulating alkaline drops” every night at bed-time in a large wine-glass-

ful of hot or cold water, and I have myself adopted the same plan. It is remarkable that several of these acquaintances who had before been habitually subject to indigestion, and bile, and languid circulation, have, in the course of a few days of taking the preservative drops, been materially relieved from the unpleasant symptoms which before afflicted them. If on going to bed I find that the dinner is not undergoing an easy digestion in the stomach, and I experience any uneasiness, or feel the slightest acidity, I increase the number of drops, from ten to fifteen.

Q. Would you now pass on to the consideration of the second series of suggestions for the preservation of health during the approach or prevalence of epidemic cholera, as they refer to the community at large, and detail all the necessary measures for that purpose?

A. This has already been done with so much promptitude and ability by the New Central Board of Health, as well as by the City of London Board of Health, whose instructions have been widely circulated* that I

* There is one part of the regulations of the City of London Board of Health concerning the cleanliness of streets and houses, which cannot meet with the unquali-

must refer you to their respective circulars for information. You will, however, permit me to observe, that while I cannot but approve, in common with my brethren, those regulations which relate to cleanliness, ventilation, surveillance and relief to the poor, and the establishment of several Boards, with instructions to watch over and report, statistically, the progress of the epidemic; I most unequivocally dissent from some of their indistinct and contradictory notions. The ex-

fied approbation of the profession, and could only have been framed under the supposition that we had to contend with a contagious disorder. Now that that absurd notion has been publicly abandoned by the magistrates of health in their recent recantation, I suppose the objectionable regulations will also be abandoned. I allude to the injunction given to the inhabitants and dwellers in small tenements, to wash their floors every day, and to the plan of converting every street by night into gurgling streams, by inundating them with water from the New River and the river Lea. Nothing could be proposed more impolitic or insalubrious. Dampness, which is the very nest of cholera, would thus, with the heat of fires in close rooms, and the natural process of evaporation in the streets, keep up at home and abroad, a state of atmosphere the very reverse of that which it is the intention of the Board of Health to secure to the public—a healthy one. Let the streets be well swept every day or every other day, and the floors of close and small rooms kept dry, and holy-stoned, like the decks of a man-of-war, and thus kept clean without moisture.

pressions made use of in their circular by the Central Board of *suspected* sources and *infected* persons, seem to favour the doctrine of contagion upheld by their predecessors,* but very manfully abandoned by the present Board. Objectionable also, except in the case of parochial paupers, are the regulations by virtue of which inspectors and sub-inspectors are authorized to penetrate into every private dwelling, and a member of a district board alone made to judge of the real character of the disease existing in a family. This would prove a cumbersome, time-losing, and invidious process, unnecessary in this enlightened country where every medical man, when called in by those who habitually place confidence in him, must be perfectly capable, after all that has been written on the subject, to judge, of the nature of the disease, of the means to be immediately adopted for the safety of the patient, and the preservation of the rest of the family from an attack of the prevailing epidemic. All this and much more would be done privately without fuss, without the least loss of time,

* See the short Appendix at page 333.

without alarming the patient or his friend, and without terrorising the neighbours, who would be shocked whenever they should happen to see an inspector, a sub-inspector, or a member of the board pay, each in his turn, a visit to some adjoining houses. The object being to tranquillize the public feeling, which has been most painfully excited—all regulations for the benefit of the public, should be divested, as much as possible, of every appearance of formality, complication, and inquisition, particularly in this the most jealous country on earth with respect to individual rights and independence.

In conclusion, I would say unto you and unto my readers, await with firmness, but not foolhardiness, with resignation yet not with dejection of spirits, that visitation of PROVIDENCE, which, after having chastened the flesh of the dwellers in India, Persia, Russia, and Germany, is now about to add England to the number of the punished nations, and truly believe that “WHAT IS, IS FOR THE BEST.”

APPENDIX.

UNDISPUTED LAWS WHICH GOVERN DISEASES IN GENERAL.

1st. Diseases, when reference is made to their origin and mode of propagation, may be divided into SPORADIC* and ENDEMIC†, or in other words into spontaneous, permanent, and transitory.

2d. If the particular causes which gave rise to any *sporadic* or spontaneous disease in one individual, should happen to act equally, and at the same time, upon many individuals, as is not unfrequently the case in catarrhs, inflammations of the chest, agues, remittent fevers, the typhus, cholera, &c. then such a sporadic disease is said to be *epidemic*.

3d. When a *sporadic* disease has become *epidemic*, it may, after a certain time, assume an additional character, viz., that of being *infectious* (or contaminating, which is a more apt expression). This happens when many individuals have been af-

* Sporadic are those diseases which seem to *start up* spontaneously and in small numbers, attacking sometimes one, at other times another individual—which in fact furnish the daily occupation of medical men, and form the $\frac{99}{100}$ of all the diseases which afflict mankind. They are not peculiar to any particular nation, and are to be met with in all quarters of the globe.

† *Endemic* are those diseases which seem to be peculiar to certain localities and certain nations.

fects in succession by a sporadic disease, in the same town, village, district, street, house, prison, or ship; and the circumambient atmosphere has become, from that circumstance, unfit for the healthy exercise of the functions of life: in which case a person exposed to such an atmosphere will feel, more or less, its bad effects by the development of some disease, the type of which will be similar to that of the disease then prevailing; for example, the bilious remittent fever, the typhus gravior, the yellow fever, the gaol and camp fever, the cholera, the putrid sore throat, and perhaps the inflammatory and intestinal fevers of lying-in women.

4th. No *infectious* or contaminating epidemic disease can be communicated by *contact*; either direct or indirrect, far or near, early or late in the disease.

5th. No individual labouring under an EPIDEMIC INFECTIOUS, or CONTAMIATING disease, nor any of his apparel, nor the objects that have been touched by him, are capable, when transported to a healthy place, of conveying the disease to a person in health. These two laws are beautifully illustrated by what happens in regard to aggravated cholera.

Thus far with regard to sporadic and epidemic diseases. Now as to the endemics.

6th. Some of the *endemic* diseases emigrate from their birth place, being carried from place to place, and propagated through *contagion*. The plague,

small-pox, lepra, syphilis, the cow-pox, and some other eruptive complaints are in this predicament.

7th. By *contagion* is meant the action by which a diseased body, through immediate or mediate contact, communicates its own disease to a body in health, which in its turn conveys it to others by the same means; and so on in succession, without any exception of age, sex, temperament, or mode of life.

8th. A *contagious* disease is that which may be conveyed to a healthy place by any individual labouring under that disease, or by his apparel, or any other thing which has been in contact with some part of his body.

9th. *Contagious* diseases are independent of all influence of the atmosphere. They commit ravages when no possible cause of unhealthiness exists in the air; they are neither checked nor promoted by a difference in the winds; by the winter or the summer; by an elevated or a low topographical situation. They are never, therefore, *epidemic*.

10th. Another specific character of the *contagious* disease is, that it may be communicated by engraftment or inoculation. This alone sufficiently distinguishes *contagious endemics* from *infectious epidemics*, for the latter cannot be inoculated—cholera for instance.

11th. Chemical and other processes for purifying the air will often reduce an *infectious* epidemic to a

simple or non-infectious epidemic, and ultimately put a stop even to the latter : so will cleanliness and ventilation. Not so with a *contagious* disease, of which no process whatever can change the character. Fumigations, ventilation, and ablutions have succeeded in checking, and even preventing, the yellow fever, or the cholera, and in depriving an epidemic typhus of its *infectious* property, whenever it had acquired that character in virtue of the third law ; but in the case of the plague, small-pox, &c. no such change has ever been effected by similar operations.

12th. The only mode of prevention from *contagious* diseases, is to avoid the contact of persons suffering from those diseases, and of their garments, or of any thing that has been used by them.

13th. *Segregation* and *insulation* are the surest preservatives from contagious diseases. But no such means can save a person from the influence of *infectious* epidemics. Hence the laws of quarantine are indispensable against the former ; and worse than useless in the latter.

☞ These laws were collected, explained, and published by the Author twelve years ago, in his work on Plague. Their re-publication at this moment will enable the Reader to comprehend the meaning of terms so generally used and mis-used.

THE END.

C. Whiting, Beaufort House, Strand.



WORKS LATELY PUBLISHED

BY THE SAME AUTHOR.

I.

ST. PETERSBURG.

A Journal of Travels to and from that Capital ; through Flanders, the Rhenish Provinces, Prussia, Russia, Poland, Silesia, Saxony, the Federated States of Germany and France.

II.

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