

# GOOD HEALTH.



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## TEA AND COFFEE CONSIDERED.

CONCLUDED.

SINCE the publication of my last, I have been reminded of the high authorities who have defended the use of the alkalis, and more particularly of Liebig's theory, or the theory commonly attributed to Liebig, but which is Lehmann's, published in Liebig's "Annalen," vol. 87, and adopted and advocated by Liebig with his usual ability.

Lehmann watched for some weeks the effects of coffee upon two persons in good health. He found that it retarded the waste of the tissues of the body, that the proportion of phosphoric acid and of urea excreted by the kidneys was diminished by the action of the coffee, the diet being in all other respects the same. Pure caffeine (which is the same as theine) produced a similar effect; the aromatic oil of the coffee, given separately, was found to exert a stimulating effect on the nervous system.

Johnstone ("Chemistry of Common Life"), closely following Liebig, and referring to the researches of Lehmann, says: "The waste of the body is lessened by the introduction of theine into the stomach, that is, by the use of tea. And if the waste be lessened, the necessity for food to repair it will be lessened in an equal proportion. In other words, by the consumption of a certain quantity of tea, the health and strength of the body will be maintained in an equal degree upon a smaller quantity of ordinary food. Tea, therefore, saves food,—stands to a certain extent in the place of food,—while at the same time it soothes the body and enlivens the mind."

He proceeds to say that "in the old and infirm it serves also another purpose.

In the life of most persons a period arrives when the stomach no longer digests enough of the ordinary elements of food to make up for the natural daily waste of the bodily substance. The size and weight of the body, therefore, begin to diminish more or less perceptibly. At this period, tea comes in as a medicine to arrest the waste, to keep the body from falling away so fast, and thus to enable the less energetic powers of digestion still to supply as much as is needed to repair the wear and tear of the solid tissues." No wonder, therefore, says he, "that the aged female, who has barely enough income to buy what are called the common necessaries of life, should yet spend a portion of her small gains in purchasing her ounce of tea. She can live quite as well on less of common food when she takes her tea along with it; while she feels lighter at the same time, more cheerful, and fitter for her work, because of the indulgence."

All this is based upon the researches of Lehmann and others, who measured the work of the vital furnace by the quantity of ashes produced—the urea and phosphoric acid excreted. But there is also another method of measuring the same, that of collecting the expired breath, and determining the quantity of carbonic acid given off by combustion. This method is imperfect, inasmuch as it only measures a portion of the carbonic acid which is given off. The skin is also a respiratory organ, co-operating with the lungs in evolving carbonic acid.

Dr. Edward Smith adopted this method of measuring the respired carbonic acid. His results were first published in "The Philosophical Transactions" of 1859, and again in chap. 35 of his volume on "Food," "International Scientific Series."

After stating, in the latter, the details of the experiments, which include depth of respiration as well as amount of carbonic acid respired, he says: "Hence it was proved beyond all doubt that tea is a most powerful respiratory excitant. As it causes an evolution of carbon greatly beyond that which it supplies, it follows that it must powerfully promote those vital changes in food which ultimately produce the carbonic acid to be evolved. Instead, therefore, of supplying nutritive matter, it causes the assimilation and transformation of other foods."

Now, note the following practical conclusions, which I quote in Dr. Smith's own words, but take the liberty of rendering in italics those passages that I wish the reader to especially compare with the preceding quotations from Johnstone: "In reference to nutrition, we may say that *tea increases waste*, since it promotes the transformation of food without supplying nutriment, and increases the loss of heat without supplying fuel, and *it is therefore especially adapted to the wants of those who usually eat too much*, and after a full meal, when the process of assimilation should be quickened, but *is less adapted to the poor and ill-fed*, and during fasting." He tells us very positively that "to take tea before a meal is as absurd as not to take it after a meal, unless the system be at all times replete with nutritive material." And again, "Our experiments have sufficed to show how tea may be *injurious if taken with deficient food and thereby exaggerate the evils of the poor*." And again: "The conclusions at which we arrived after our researches in 1858 were that tea should not be taken without food, unless after a full meal; or with insufficient food; or by the young or very feeble; and that *its essential action is to waste the system or consume the food*, by promoting vital action which it does not support, and they have not been disproved by any subsequent scientific researches.

This final assertion may be true, and to those who "go in for the last thing out," the latest novelty or fashion in science, literature, and millinery, the absence of any refutation of later date is quite enough.

But how about the previous scientific researches of Lehmann, who, on all such subjects, is about the highest authority that can be quoted? His three volumes on "Physiological Chemistry," translated and republished by the Cavendish Society, stand pre-eminent as the best written,

most condensed and complete work on the subject; and his original researches constitute a lifetime's work, not of mere random change-ringing among the elements of obscure and insignificant organic compounds, but of judiciously selected chemical work, having definite philosophical aims and objects.

It is evident from the passages I have emphatically quoted that Dr. Smith flatly contradicts Lehmann, and arrives at directly contradictory physiological results and practical inferences. Are we, therefore, to conclude that he has blundered in his analysis, or that Lehmann has done so? On carefully comparing the two sets of investigations, I conclude that there is no necessary contradiction *in the facts*; that both may be, and in all probability are, quite correct as regards their chemical results; but that Dr. Smith has only attacked half the problem, while Lehmann has grasped the whole.

All the popular stimulants, refreshing drugs, and "pick-me-ups" have two distinct and opposite actions,—an immediate exaltation, which lasts for a certain period, varying with the drug and the constitution of its victim; and a subsequent depression proportionate to the primary exaltation, but, as I believe, always exceeding it either in duration or intensity, or both, thus giving, as a net or mean result, a loss of vitality.

Dr. Smith's experiments only measured a partial result (the carbonic acid exhaled from the lungs without that from the skin) *of the first stage*, the period of exaltation. His experiments were extended to 50 minutes, 71 minutes, 65 minutes, and in one case to 1 hour and 50 minutes. It is worthy of note that in experiment 1 were 100 grains of black tea, which were given to two persons, and the time of the experiment was 50 and 71 minutes; the average increase was 71 and 68 cubic inches per minute; while in No. 6, with the same dose and the carbonic acid collected during 1 hour and 50 minutes, the average increase per minute was only 47.5 cubic inches. These indicate the decline of the exaltation, and the curves on his diagrams show the same. His coffee results were similar.

We all know that the "refreshing" action often extends over a considerable period. My own experiments on myself show that this is three or four hours; while that of beer or wine is less than one hour (moderate doses in each case).

I have tested this by walking measured distances after taking the stimulant and comparing with my walking powers when taking no other beverage than cold water. The duration of the tea stimulation has been also measured, painfully so, by the duration of sleeplessness when female seduction has led me to drink tea late in the evening. The duration of coffee was about one-third less than tea.

Lehmann's experiments, extending over weeks (days instead of minutes), measured the whole effect of the alkaloid and oil of the coffee, during both the periods of exaltation and depression; and therefore supplied a mean or total result, which accords with ordinary every-day experience. It is well known that the pot of tea of the poor needle-woman subdues the natural craving for food; the habitual smoker claims the same merit for his pipe, and the chewer for his quid. Wonderful stories are told of the long abstinence of the drinkers of maté, chewers of betel-nut, Siberian fungus, coca-leaf, and pepperwort, and the smokers and eaters of hashish, etc. Not only is the sense of hunger allayed, but less food is demanded for sustaining life.

It is a curious fact that similar effects should be produced and similar advantages claimed for the use of a drug which is totally different in its other chemical properties and relations. "White arsenic," or arsenious acid, is the oxide of a metal, and as far as the poles asunder from the alkaloids, alcohols, and aromatic resins, in chemical classification. But it does check the waste of the tissues, and is eaten by the Styrians and others with physiological effects curiously resembling those of its chemical antipodeans above named. Foremost among these physiological effects is that of "making the food appear to go farther."

It is strange that any physiologist should claim this diminution of the normal waste and renewal of tissue as a merit, seeing that life itself is the product of such change, and death the result of its cessation. But in the eagerness that has been displayed to justify existing indulgences, this claim has been extensively made by men who ought to know better than to admit such a plea.

The argument that has been the most industriously urged in favor of all the vice-drugs, and each in its turn, is that miserable apology that has been made for every folly, every vice, every political abuse, ev-

ery social crime (such as slavery, polygamy, etc.) when the time has arrived for reformation. I cannot condescend to seriously argue against it, but merely state the fact that the widely diffused practice of using some kind of stimulating drug has been claimed as a sufficient proof of the necessity or advantage of such practice. I leave my readers to bestow on such a plea the treatment they may think it deserves. Those who believe that a rational being should have rational grounds for his conduct, will treat this customary refuge of blind conservatism as I do.—*Knowledge.*

### HYGIENE OF THE SKIN.

BY CHARLES S. SHELDON, A. M., M. D.

CONCLUDED.

WE will next consider what may be thought the most important means of promoting the health of the skin; viz., the use of water externally. This is a subject which *should* enlist our warmest interest, and I wish there might be awakened a genuine enthusiasm for this most grateful and most necessary, but often neglected fluid, water. The physiological reasons for bathing have been indicated somewhat already. When undisturbed by washing and friction, the various products of the skin, together with particles of dust and other foreign substances attracted to it, soon form a coating which materially interferes with the proper action of the skin. As a consequence, the impurities which it should get rid of are thrown upon *other organs*, causing congestion or inflammation, and the whole system is placed in a condition to contract any disease to which it is most liable. Take for example catarrh, which has such hosts of victims in Michigan. By habitual bathing in cold water, with the brisk friction which should always follow it, such a tone is given to the skin that the danger of congestion of the mucous membranes is very materially lessened. In the same way we may do much toward warding off rheumatism, inflammatory diseases of all sorts, and many kinds of fevers. We hear all kinds of opinions about bathing, even in the medical profession. Some talk about the vitality being all washed out of the body, producing debility or actual disease. Some condemn cold bathing in toto. As regards some individual cases, these opinions may be correct; for cold water, as well as good food and pure air, and many other good things, is liable to abuse in the hands of

the ignorant or thoughtless. Every case must be treated according to its individual peculiarities; and even in the matter of bathing it is well to consult some one whose knowledge is better than our own.

It is not claimed that bathing is a panacea. Yet in a multitude of cases it may be the deciding factor between a condition of vigorous health, mentally and physically, with a capacity to do easily the work of life, and an existence very much below it in usefulness and happiness. As to the frequency, we may lay it down as a rule that a person of average health should have a complete bath every day. This rule, like all others, has its exceptions in the case of invalids, and persons of an unusual delicacy or feebleness of constitution. During the winter season one who thoroughly washes the whole body twice a week may be called tolerably clean. That more do not reach even to this standard is due rather to laziness, shiftlessness, and disregard of known laws, than to ignorance of the subject.

The excuses usually made are lack of time and conveniences for bathing. But these will not hold good in the bath which I will now describe, and which is most available to the majority of people. It is called the sponge or hand bath, when the water is applied to the body by a sponge or the hand. The requisites are a basin of water, a piece of good soap, a large rough towel, and something to protect the floor. If the tendency to chilliness be too great, the whole surface need not be exposed at once, but the different parts of the body may be washed and dried separately. But the better plan is to apply the water to the whole body, and follow it with brisk friction till there is a glow of warmth all over the surface. This sense of *warmth* after the bath is very important, since it is the *test* by which the benefit to be derived from all *kinds* of bathing is to be estimated. The temperature of the water, to get the best *tonic* effects, should be what is called cold or cool; and the time chosen, when first getting out of bed in the morning. The time occupied by the whole performance need not exceed ten minutes. When obtainable, a large shallow tub for this bath will insure more thoroughness and admit of the use of more water, but the water should not come above the ankles, lest it produce too much lowering of the temperature. I will not stop to describe other bathing processes. Baths are usually classified according to

the temperature of the water, into cold, from 60° to 85° F.; tepid, between 85° and 95°; warm, from 95° to 104°; and hot from 104° to 110°.

The question is often asked whether *cold* or *warm* baths is most desirable—which is healthier, etc. This question cannot be answered, always, till we know the individual case under consideration. In general, we may say, that the person of average health and vigor of constitution will be most benefited by the cold bath of 60° to 85°. On the other hand, there are many persons, especially women, in whom *reaction* does not readily take place, and the consequence is an undue chilliness following the bath, which should never be the case. The test, in any case, must be largely the sensations of the individual. It should leave an agreeable sense of warmth and refreshing. Many persons who cannot take cold baths with benefit at first, can educate themselves, or their skins, by gradually reducing the temperature of the water each day. To those who can bear the cold bath, however, it is by far the best tonic. The reaction following the first slight depression increases the action of the heart, improves the circulation, and thereby betters the nutrition of the whole body. As a rule, cold baths should be taken in the morning; although, if inconvenient then, they may be taken in the evening. The duration should be short. A large quantity of water should not be used; and more than all, the friction following should be active enough to produce the agreeable warmth I have spoken of. They are not well adapted for the feeble or aged, or those whose skins or extremities are habitually cold. In the winter season it is natural and proper to have the water warmer than in summer.

Although the primary object of bathing is cleanliness, it is yet the experience of every one that there is nothing more *restful* and *refreshing*, as well. After a hard day's work, what can be more luxurious, and what can we do better to revive our exhausted energies and fit us for restful sleep, than to treat ourselves to a *rational, thorough bath*? And not the body alone, but the mind as well, is quieted and refreshed. Homer, speaking of a person just returned from the bath and anointed with fragrant oils, says that he appeared taller and larger than before, and was grown something like the immortals. The tepid bath, from 85° to 95°, is well suited for those who have not sufficient vigor to bear

well the cold bath. It is soothing and restorative, and so is well adapted for the afternoon or evening, after the labor of the day is largely done, though it may be taken at any time in the day. The duration of this bath may be longer than when cold, and more water may be used. Many think that the tepid bath is preferable for common use to the cold bath. The warm bath, from 95° to 104°, while soothing and tranquilizing, has a marked tendency to relax the skin, and should be taken with some caution as to subsequent exposure, since the reaction after the bath is not so permanent, and exposure to cold air may produce congestion of some internal organ. It is therefore best adapted for evening before going to bed. The hot bath is even more liable to abuse, and should be taken only by advice of a physician.

The moral aspects of the subject deserve some notice. A clean body and a clean soul go together, just as dirt and degradation are always inseparable. If we would rescue man the world over from vileness and evil habits, and right up his moral character, we may properly begin by teaching him that cleanliness is next to godliness. Moses of old was inspired to take this view of the matter, when he laid down the ceremonial law, which contained provisions for such scrupulous cleanliness; and I presume the vigor of the Jewish race, through all the centuries, has been largely maintained by its observance. It follows from this standpoint, that public baths should be established in all our large towns, either by private or public benefaction, with sufficient capacity for accommodating large numbers of the working classes. What measure is there, costing so little, that would contribute so much to their comfort and physical well-being, as well as tend to make them orderly and self-respectful? Where this plan has been carried out, as in England, it has been followed by the best results.

A very laudable effort is now being made to introduce into our common schools the study of the physiological effects of alcohol. This is right; but as it seems to me, it would be at least equally appropriate to instruct our children as to the functions of the skin, and the proper measures for its care. In this way cleanliness and purity would have a more prominent place in every household; while the rising generation, with healthier bodies and more self-respectful minds, would more nearly realize the ideal condition of a *mens sana in sano corpore*—a sound mind in a

healthy body. In regard to this whole subject, Alex. Bain has said: "A place should be therefore found for the bath among the regular occupations of life. It should be a permanent institution, ranking immediately after the prime necessities of our being. Either daily or several times a week should every one repair to it, in some shape or other. Either at morn, midday, or evening, according to strength or leisure. There certainly does not exist a greater device in the art of living, or a greater instrument for securing a vigorous and buoyant existence. It is one of the most powerful diversions to the current of business occupations. It can suspend for a time the pressure of our pursuits and anxieties, and return us fresh for the enjoyment of our other delights. To the three varieties of state which our bodies pass through daily—eating, working, sleeping—it would add a fourth, luxurious in itself, and increasing the relish of all the rest."

#### REST AND SLEEP.

[THE following interesting article upon this subject we quote from "Hygiene" by Dr. Arthur Newsholme, of London.]

Life is made up of alternations of rest and action. The exercise of any organ is followed by a necessary period of repose, during which the oxidized materials produced by functional activity are removed by the blood, and carried to the excretory organs; while at the same time fresh nutritive material is supplied by the blood to make good the losses thus sustained. Not only is there during rest a storing up of tissue-food brought by the blood, but if the rest be duly proportioned to the amount of exercise, a certain amount of reserve force is also stored up, ready for any extra emergency.

The only apparent exceptions to this rule of alternation of rest and exercise are the heart and lungs, and some less important organs acting out of the control of personal volition. But even these organs obey the universal law. The difference is that their rest is very frequent and momentary; the heart, having to contract sixty or seventy times per minute, rests,  $\frac{9}{11}$  of a second each second, or more than thirteen hours in the twenty-four. The lungs and respiratory muscles rest a shorter time than this, but probably about three hours per day.

The necessity for rest is well shown by

the sense of taste. If salt is kept in the mouth for a considerable time, the power of tasting it disappears, and only returns in its original strength after several hours. The gustatory nerve has been exhausted.

The other sense-organs illustrate the same principle. Persons are not uncommonly made deaf by the deadening sounds of machinery. After looking at a particular color for some time, the nerves receiving impressions from this color are exhausted, and only its complementary color is visible. The importance of rest is even greater in the case of the brain and muscles.

Rest may be either *partial* or *general*. The principle of partial rest has very useful practical bearings. Such rest is illustrated by the student who takes a walk, or uses methodical gymnastic exercises; a concert may provide agreeable exercise for the auditory nerves and the part of the brain connected with them, while allowing the over-tired intellectual part of the brain to rest in peace. Similarly, light literature may prove a pleasing rest after severer studies.

Walking is more especially the exercise of the brain-worker. By it a large amount of blood is determined to the muscles, and in accordance with this, one finds the difficulty of carrying on any discussion requiring serious thought during an active walk.

Partial rest is the same thing as change of occupation, and by a careful regulation of the relative amount of cerebral and muscular work, one can economize one's powers to a very great extent. The horse, which exercises chiefly his muscles, requires only five or six hours to recuperate his force; and our muscles require less sleep than our brain. It is evident from this that in order to economize the amount of sleep necessary for the maintenance of health, muscular ought to be in excess of cerebral work. The student requires much more sleep than the laborer; if he obtains a proper amount of sleep for his brain, this is too much for his muscles—indeed far too much, reckoning their comparative inactivity during his waking hours.

Sleep is the only form of complete and general rest. In attaining this condition, the muscles sleep first, then the eyes close (owing to muscular rest), and the thoughts wander; hearing is the last sense to lose cognizance of the surrounding world; dreaming succeeds wandering thoughts, and even dreaming may cease if the brain repose is complete.

During sleep the brain diminishes in size, and becomes paler; in other words, there is cerebral anæmia, or diminution in the amount of blood in the brain. That sleep and cerebral anæmia are closely related to each other is, to some extent, shown by the fact that pressure on the carotids will produce sleep; but that this is not the only factor is evident from the fact that if nitrite of amyl, (a drug producing an extra flow of blood to the brain) be inhaled by a person asleep, he does not wake up in consequence. It is probable that the cerebral anæmia is rather a consequence of the functional inactivity of the brain during sleep than a cause of the sleep.

It was formerly thought that sleep is produced by cerebral congestion; that is, an increased flow of blood to the brain. But cerebral congestion produces a stupefied and unnatural sleep, the same sort of sleep as is produced by an excess of stimulants.

During sleep, certain organs still continue to perform their functions. The heart and lungs continue their work; the blood is circulated and purified, the intestines continue their vermicular contractions, and absorb food from the alimentary canal; and the organs nourish themselves at leisure, and reconstruct their tissues.

It is necessary to remember two facts in relation to sleep, which have important practical bearings: First, that during sleep, *combustion is less active*, and so the temperature of the body tends to be somewhat lowered; secondly, that *assimilation is more energetic*, which favors the absorption of noxious vapors, if any are present. There is less danger of remaining in a stuffy, impure atmosphere during the day than during the night, though, judging by the ordinary condition of bedrooms, one would imagine that exactly the opposite was the case. One may remain in an ague district during the day without becoming infected; but sleeping in it is nearly certain to impart the disease. This is doubtless partly owing to the increased malarial emanations during the night, but, to a greater extent, to the increased susceptibility while sleeping.

#### PRACTICAL RULES CONCERNING SLEEP.

1. *Amount of sleep required.*—It is impossible to lay down any fixed rule applicable to all persons and circumstances. The amount of sleep required, like the amount of food, varies greatly.

*Habitual deficiency* of sleep produces a condition of wretchedness and prostration, with great restlessness. Prolonged watching inevitably breaks down the constitution. Not the least evil consequence of irregular and deficient sleep is, that sleep, when desired, is often courted in vain.

*Habitual excess* of sleep produces a condition of brain less active than usual, and less favorable for thought and action. Impressions are received less readily, and the power of will is correspondingly diminished.

The amount of sleep required varies with—

(1.) *Age*.—The infant, if healthy, spends the larger part of his existence in sleep; gradually the amount required diminishes, until, for the adult, seven or eight hours suffice. Children over two or three years old require sleep only during the night; and this is to be encouraged, as sleep during the day prevents fresh air and exercise. In advanced life there is a tendency to revert to infantile habits, sleep occurring in frequent short snatches.

(2.) *Sex*.—Women seem to require rather more sleep than men, probably owing to the greater impressibility of their nervous system. The hours of sleep required have, in accordance with this view, been stated to be, "Six for a man, seven for a woman, and eight for a fool."

(3.) *Temperament*.—Those of a cold, lymphatic temperament require more sleep than sanguine or nervous people, though the latter sleep more deeply. Frederick the Great, John Hunter, and Napoleon I. are said to have required only five hours' sleep per day; but the last of these had the faculty of taking short naps at a few moments' notice.

(4.) *The sick and convalescent* require much more sleep than those who are healthy.

(5.) *Habit* has a very important influence. There can be little doubt that many people sleep too much, and thus dull to some extent their mental faculties; but on the other hand, modern life, with its nervous strain, keen competition, and constant hurry and worry, makes it necessary to have a larger amount of sleep than our forefathers required.

(6.) *Occupation*.—Mental work requires more repose than physical.

2. *Relation of sleep to food*.—The molecular life of the tissues—that is, the processes of nutrition—ought to be undisturbed. These go on most perfectly when

no active function, such as that of digestion, is being performed. In fact, it is as difficult for them to build up their tissues during the performance of an active function, as it is for us to sleep while driving over a rough road. But while the stomach carries on the digestive functions to only a small extent during sleep, the intestines continue still to digest and absorb food. In accordance with these facts, it is advisable to allow several hours between the last meal of the day and sleep, especially if animal food has been taken.

3. Remembering the facts that absorption is increased, and the temperature is lowered during sleep, it is important to *sleep in pure air*, and to have *warm coverings*, especially about the shoulders and arms. There is a common tendency, especially with children, to throw all coverings off the arms and shoulders; and many an obstinate cough might be cured by the simple expedient of wearing a flannel jacket at night.

*Sleep during the night and not during the day*.—It would hardly be necessary to say this, as the universal instinct of animals shows its advisability; but, unfortunately, the habits of mankind have commonly led to a partial reversal of the natural arrangement.

Watchmen and night policemen not uncommonly suffer from their forced night occupations. They miss the sunlight, and have to endure a lower temperature, and the depressing influences of a more solitary life.

Sleeplessness, as a rule, occurs only when some physiological law has been broken. To relieve it, it is essential to equilibrate muscular and mental functions. Increase of muscular exercise is an important element in its treatment. In addition, it is advisable not to have any severe mental work during the evening, nor to indulge in late suppers. Sleeplessness is the bane of many men of a nervous temperament, and chiefly attacks those of sedentary habits. It is apt to recur, and for this reason, if for no other, narcotics ought to be scrupulously avoided. The habit of taking such soporifics is unfortunately becoming much more common, and is productive of many evils. Death from accidental overdose is a frequent calamity, and the dose in all cases requires to be gradually increased, until most injurious quantities are necessary to induce sleep. The consequence is that the poor invalid's nervous system is completely ruined, his power of

will is annihilated, and he becomes the miserable slave of an evil habit, whose end is death.

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**CONFESSIONS AND OBSERVATIONS OF  
SIR EDWARD LYTTON BULWER.**

CONCLUDED.

THE next thing that struck me was the extraordinary ease with which, under this system, good habits are acquired and bad habits relinquished. The difficulty with which, under orthodox medical treatment, stimulants are abandoned, is here not witnessed. Patients accustomed for half a century to live hard and high, wine-drinkers, spirit-bibbers, whom the regular physician has sought in vain to reduce to a daily pint of sherry, here voluntarily resign all strong potations, and after a day or two cease to feel the want of them, and reconcile themselves to water as if they had drunk nothing else in all their lives. Others who have had recourse for years and years to medicine,—their potion in the morning, their cordial at noon, their pill before dinner, their narcotic at bedtime,—cease to require these aids to life, as if by a charm. Nor this alone. Men to whom mental labor has been a necessity; who have existed on the excitement of the passions and the stir of the intellect; who have felt when these were withdrawn, the prostration of the whole system, the lock to the wheel of the solid machine,—all return at once to the careless spirits of the boy in his first holiday.

Here lies a great secret; water thus skillfully administered is in itself a wonderful excitant. It supplies the place of all others, it operates powerfully and rapidly upon the nerves, sometimes to calm them, sometimes to irritate, but always to occupy. Hence follows a consequence which all patients have remarked,—the complete repose of the passions during the early stages of the cure; they seem laid asleep as if by enchantment. The intellect shares the same rest. After a short time, mental exertion becomes impossible; even the memory grows far less tenacious of its painful impressions; cares and griefs are forgotten; the sense of the present absorbs the past and future; there is a certain freshness and youth which pervades the spirits, and lives upon the enjoyment of the actual hour. Thus the great agents of our mortal wear and tear—the passions and the mind—calmed into strange rest, nature seems to leave the

body to its instinctive tendency, which is always toward recovery. All that interests and amuses is of a healthful character; exercise, instead of being an unwilling drudgery, becomes the inevitable impulse of the frame braced and invigorated by the element. A series of reactions is always going on, the willing exercise produces refreshing rest; and refreshing rest, willing exercise. The extraordinary effect which water taken early in the morning, produces on the appetite, is well known among those who have tried it, even before the water cure was thought of,—an appetite it should be the care of the skillful doctor to check into moderate gratification; the powers of nutrition become singularly strengthened, the blood grows rich and pure; the constitution is not only amended, but it undergoes a change.

The safety of the system, then, struck me first; its power of replacing by healthful stimulants the morbid ones it withdrew, whether physical or moral, surprised me next; that which thirdly impressed me was no less contrary to all my preconceived notions. I had fancied that, whether good or bad, the system must be one of great hardship, extremely repugnant and disagreeable. I wondered at myself to find how soon it became so associated with pleasurable and grateful feelings as to dwell upon the mind among the happiest passages of existence. For my own part, despite all my ailments, or whatever may have been my cares, I have ever found exquisite pleasure in that sense of *being* which is, as it were, the conscience, the mirror of the soul. I have known hours of as much and as vivid happiness as perhaps can fall to the lot of man; but among all my most brilliant recollections I can recall no periods of enjoyment at once more hilarious and serene than the hours spent on the lonely hills of Malvern, none in which nature was so thoroughly possessed and appreciated. The rise from a sleep as sound as childhood's; the impatient rush into the open air, while the sun was fresh and the birds first sang; the sense of an unwon strength in every limb and nerve, which made so light of the steep ascent to the holy spring; the delicious sparkle of that morning draught; the green terrace on the brow of the mountain, with the rich landscape wide and far below; the breeze that once would have been so keen and biting, now but exhilarating the blood,



and lifting the spirits into religious joy; and this keen sentiment of present pleasure rounded by a hope sanctioned by all I felt in myself, and nearly all that I witnessed in others,—that that very present was but the step, the threshold, into an unknown and delightful region of health and vigor, a disease and a care dropping from the frame and the heart at every stride.

I staid some nine or ten weeks at Malvern; and business from which I could not escape obliging me then to be in the neighborhood of town, I continued the system seven weeks longer under Dr. Weiss, of Petersham. During this latter period the agreeable phenomena which had characterized the former—the cheerfulness, the *bien aise*, the consciousness of returning health—vanished, and were succeeded by great irritation of the nerves, extreme fretfulness, and the usual characteristics of the constitutional disturbance to which I have referred. I had every reason, however, to be satisfied with the care and skill of Dr. Weiss, who fully deserves the reputation he has acquired, and the attachment entertained for him by his patients; nor did my judgment ever despond or doubt of the ultimate benefits of the process. I emerged at last from these operations in no very portly condition. I was blanched and emaciated, washed out like a thrifty housewife's gown; but neither the bleaching nor the loss of weight had in the least impaired my strength. On the contrary, all the muscles had grown as hard as iron, and I had become capable of great exercise without fatigue. My cure was not effected, but I was compelled to go into Germany. On my return homeward, I was seized with a severe cold, which rapidly passed into high fever. Fortunately, I was within reach of Doctor Schmidt's magnificent hydropathic establishment at Boppard, and thither I caused myself to be conveyed. Here I had occasion to experience the wonderful effect of the water cure in acute cases; slow in chronic disease, its beneficial operation in acute is immediate. In twenty-four hours all fever had subsided, and on the third day I resumed my journey, relieved from every symptom that had before prognosticated a tedious and perhaps alarming illness.

And now came gradually, yet perceptibly, the good effects of the system I had undergone; flesh and weight returned; the sense of health became conscious and

steady; I had every reason to bless the hour when I first sought the springs of Malvern. And here I must observe, it often happens that the patient makes but slight apparent improvement, when under the cure, compared with that which occurs subsequently. A water-doctor of repute at Brussels said frankly to a grumbling patient, "I do not expect you to be well while here; it is only on leaving me that you will know if I have cured you."

It is as the frame recovers from the agitation it undergoes, that it gathers round it power utterly unknown to it before; as the plant, watered by the rains of one season, betrays in the next the effect of the grateful dews.

I had always suffered so severely in winter, that the severity of our last one gave me apprehensions, and I resolved to seek shelter from my fears at my beloved Malvern. I here passed the most inclement period of the winter, not only perfectly free from the colds, rheum, and catarths which had hitherto visited me with the snows, but in the enjoyment of excellent health; and I am persuaded that for those who are delicate, and who suffer much during the winter, there is no place where the cold is so little felt as at a water-cure establishment. I am persuaded, also, and in this I am borne out by the experience of most water-doctors, that the cure is most rapid and effectual during the cold season, from autumn through the winter. I am thoroughly convinced that consumption in its earlier stages can be more easily cured, and the predisposition more permanently eradicated, by a winter spent at Malvern, under the care of Doctor Wilson, than by the timorous flight to Pisa or Madeira. It is by hardening, rather than defending, the tissues that we best secure them from disease.

And now, to sum up, and to dismiss my egotistical revelations, I desire in no way to overcolor my own case. I do not say that when I first went to the water cure I was affected with any disease immediately menacing to life; I say only that I was in that prolonged and chronic state of ill health, which made life at the best extremely precarious. I do not say that I had any malady which the faculty could pronounce incurable; I say only that the most eminent men of the faculty had failed to cure me. I do not even now affect to boast of a perfect and complete deliverance from all my ailments; I cannot declare that a constitution naturally deli-

cate has been rendered Herculean, or that the wear and tear of a whole manhood have been thoroughly repaired. What might have been the case, had I not taken the cure at intervals, had I remained at it steadily for six or eight months without interruption, I cannot do more than conjecture; but so strong is my belief that the result would have been completely successful, that I promise myself, whenever I can spare the leisure, a long renewal of the system. These admissions made, what have I gained meanwhile to justify my eulogies and my gratitude?—An immense accumulation of the *capital of health*. Formerly it was my favorite and querulous question to those who saw much of me, “Did you ever know me twelve hours without pain or illness?” Now, instead of these being my constant companions, they are but my occasional visitors. I compare my old state and my present to the poverty of a man who has a shilling in his pocket, and whose poverty is therefore a struggle for life, with the occasional distress of a man of \$25,000 a year, who sees but an appendage endangered or a luxury abridged. All the good that I have gained is wholly unlike what I have ever derived either from medicine or the German mineral baths. In the first place, it does not relieve a single malady alone, it pervades the whole frame; in the second place, far from subsiding, it seems to increase by time, so that I may reasonably hope that the latter part of my life, instead of being more infirm than the former, will become, so far as freedom from suffering, and the calm enjoyment of external life are concerned, my real, my younger, youth. And it is this profound conviction which has induced me to volunteer these details, in the hope (I trust a pure and kindly one) to induce those who have suffered more or less as I have done, to fly to the same rich and bountiful resources. We ransack the ends of the earth for drugs and minerals; we extract our potions from the deadliest poisons; but around us and about us, Nature, the great mother, proffers the Hygeian fount, unsealed and accessible to all. Wherever the stream glides pure, wherever the spring sparkles fresh, there, for the vast proportion of the maladies which Art produces, Nature yields the benignant healing.

The remedy is *not* desperate; it is simpler, I do not say than any *dose*, but than any *course*, of medicine. It is infinitely

more agreeable. It admits no remedies for the complaint which are inimical to the constitution. It bequeaths none of the maladies consequent on blue pills and mercury, on purgatives and drastics, on iodine and acanite, on leeches and the lancet. If it cures your complaint, it will assuredly strengthen your whole frame; if it fails to cure your complaint, it can scarcely fail to improve your general system. As it acts, or ought, scientifically treated, to act, first on the system, lastly on the complaint, placing Nature herself in the way to throw off the disease, so it constantly happens that the patients at a hydropathic establishment will tell you that the disorder for which they came is not removed, but that in all other respects their health is better than they ever remember it to have been. Thus, I would not only recommend it to those who are sufferers from some grave disease, but to those who require merely the filip, the alterative, or the bracing which they now often seek in vain in country air or a watering-place. For such, three weeks at Malvern will do more than three months at Brighton or Boulogne; for at the water cure the whole life is one remedy; the hours, the habits, the discipline, that not incompatible with gaiety and cheerfulness (the spirits of hydropathists are astounding, and when in high spirits, all things are amusing), tend, perforce, to train the body to the highest state of health of which it is capable.

The water cure as yet has had this evident injustice; the patients resorting to it have mostly been desperate cases. So strong a notion prevails that it is a desperate remedy, that they only who have found all else fail, have dragged themselves to the Bethesda Pools. That all who are thus not only abandoned by hope and the College, but weakened and poisoned by the violent medicines absorbed into their system for a score or so of years,—that all should not recover is not surprising! The wonder is that the number of recoveries should be so great; that every now and then we should be surprised by the man whose untimely grave we predicted when we last saw him, meeting us in the streets ruddy and stalwart, fresh from the springs of Gräfenberg, Boppard, Petersham, or Malvern.

Here then, O brother, O afflicted ones, I bid you farewell. I wish you one of the most blessed friendships man ever made—the familiar intimacy with water. Not Undine in her virgin existence more

sportive and bewitching, not Undine in her wedded state more tender and faithful, than the element of which she is the type. In health may you find it the joyous playmate, in sickness the genial restorer and soft assuager. Round the healing spring still literally dwell the jocund nymphs in whom the Greek poetry personified mirth and ease. No drink, whether compounded of the gums and resin of the old Falernian, or the alcohol and acid of modern wine, gives the animal spirits which rejoice the wine-drinker. Let him who has to go through severe bodily fatigue, try first whatever—wine, spirits, porter, beer—he may conceive most generous and supporting; let him then go through the same toil with no draughts but from the crystal lymph; and if he does not acknowledge that there is no beverage which man concocts so strengthening and animating as that which God pours forth to all the children of nature, I throw up my brief. Finally, as health depends upon healthful habits, let those who desire easily and luxuriously to glide into the courses most agreeable to the human frame, to enjoy the morning breeze, to grow epicures in the simple regimen, to become cased in armor against the vicissitudes of our changeful skies, to feel and to shake off light sleep as a blessed dew, let them, while the organs are yet sound and the nerves yet unshattered, devote an autumn to the water cure.

And you, O parents! who, too indolent, too much slaves to custom to endure change for yourselves, to renounce for a while your artificial natures, but who still covet for your children hardy constitutions, pure tastes, and abstemious habits; who wish to see them grow up with a manly disdain to luxury, with a vigorous indifference to climate, with a full sense of the value of health, not alone for itself, but for the powers it elicits, and the virtues with which it is intimately connected, the serene, unfretful temper, the pleasures in innocent delights, the well-being that, content with self, expands in benevolence to others, you I adjure not to scorn the facile process of which I solicit the experiment. Dip your young heroes in the spring, and hold them not back by the heels. May my exhortations find believing listeners; and may some, now unknown to me, write me word from the green hills of Malvern, or the groves of Petersham, "We have hearkened to you—not in vain." Adieu, Mr. Editor; the ghost returns to silence.


### THE FIRST NECESSITY OF LIFE.

THE first necessity of life is air to breathe; and the best way and the safest way to prevent disease is to breathe fresh, natural air, and plenty of it, all our life. This, no doubt, in the present day, is an impossibility, because man is a social being, and the precept, "Love thy neighbor as thyself," is implanted in his constitution. I mean that so much of the happiness and health of each individual depends on the habits, practices, and opinions of the society in which he lives, that he cannot reap the full benefit of his own advancement until similar principles have been embraced and realized in practice by his fellow-men. A moment's thought will be sufficient to convince of this truth. While some draught-dreading hypochondriac insists on having every inlet of fresh air closed, other persons will be compelled to breathe the same contaminated, unrefreshing atmosphere; for breathe we must. Respiration is the first sign of independent life, and the incessant rise and fall of the chest continues to remind us that life exists. The process of breathing enables the blood to clear away the old rubbish of the fabric piece by piece, and put down new life-giving materials. Air, pure in quality and large in quantity, is necessary to keep us in health. How much I wish I could see this important lesson carried out practically to a larger extent. Our dwellings should be so constructed at all times as to admit a supply of fresh air, and an outlet should be provided for the escape of the deteriorated air.


There is no room to doubt that many diseases are caused and favored through constantly neglecting to admit this great and good physician into our homes. Without air no animal or vegetable could exist. For want of a due supply of it, the mind and body of man suffer; headache, faintness, weariness, craving for stimulants, and colds may all be produced by breathing air which has been rendered impure.

Some persons examine the heavens, others the earth, others the creatures that live upon the earth, and they may all gain a great amount of knowledge by their examinations; but to "know thyself" is more important than all; for though a man gain the whole world, and possess not health of body and mind, it profiteth him nothing.—*House and Home.*

KEEP the head cool, and the feet warm.



## TEMPERANCE AND MISCELLANY,



Devoted to Temperance, Mental and Moral Culture, Social Science,  
Natural History, and other interesting Topics.

### THE SILVER LINING.

There's never a day so sunny  
But a little cloud appears ;  
There's never a life so happy  
But has had its time of tears ;  
Yet the sun shines out the brighter  
When the stormy tempest clears.

There's never a garden growing  
With roses in every plot ;  
There's never a heart so hardened  
But it has one tender spot ;  
We have only to prune the border  
To find the forget me-not.

There's never a cup so pleasant  
But has bitter with the sweet ;  
There's never a path so rugged  
That bears not the prints of feet ;  
And we have a Helper promised  
For the trials we may meet.

There's never a sun that rises  
But we know 'twill set at night ;  
The tints that gleam in the morning  
At evening are just as bright ;  
And the hour that is the sweetest  
Is between the dark and light.

There's never a dream that's happy  
But the waking makes us sad ;  
There's never a dream of sorrow  
But the waking makes us glad ;  
We shall look some day with wonder  
At the troubles we have had.

There's never a way so narrow  
But the entrance is made straight ;  
There's always a guide to point us  
To the "little wicket gate ;"  
And the angels will be nearer  
To a soul that is desolate.

There's never a heart so haughty  
But will some day bow and kneel ;  
There's never a heart so wounded  
That the Saviour cannot heal ;  
There's many a lowly forehead  
That is bearing the hidden seal.

—Sel.

Written for GOOD HEALTH.

### "A TROUBLER IN ISRAEL."

BY ELEANOR KIRK.

CONTINUED.

THE Westbrook baby had been attracted to her father from the very commencement of her little life, and repelled from her mother in equal measure. The latter generally approached her with a spoon in her hand. Her father never did. This is undoubtedly a partial ex-

planation, at least, of that early antipathy which was destined to endure and strengthen as the years rolled by. But who can throw the needed light on so strange an alienation? Mrs. Westbrook had been very unhappy, as well as physically ill, during all the months that had preceded the birth of this child. There never was a more unwelcome little one, though it is equally true that no child ever had more attentive nursing. This was, as we have seen, extremely injudicious ; but the mother gave the best she had to the work. She did consider it a waste of precious time to give up all the hours to the care of this infant whom she never could please ; and so it was. But Mrs. Westbrook was spiritually sustained by the consciousness of self-sacrifice. She had not wanted this child ; but no one should ever have reason to say that she was not a devoted mother. So she stuffed it and dosed it and poisoned it with bad air, and kept it as tightly swathed in linen bands as she had formerly confined it by the eighteen-inch corsets, and felt herself a martyr to the cause of motherhood.

Mrs. Westbrook wore these corsets till one day, during the fifth month of pregnancy, she was attacked by violent convulsions, and very nearly lost her life. Bridget, the cook, who, notwithstanding her admiration for these tiny instruments of torture, had more sense than either the husband or physician, seized a pair of scissors, and deftly severed the lacing. The report that followed forced a ray of light into the head of one of those gentlemen.

"Ladies will do these things," the doctor remarked to his horrified companion, "and really I don't see as it ever does any great harm. After they have borne a child or two, they get bravely over it, and learn to consider their comfort before their looks."

Mr. Westbrook was always distinguished for going straight from effect to cause, and he did so on this occasion.

"But Doctor," he said, "what I want to know is this : Is it not fair to infer that those corsets are the primary cause of the

convulsions? Why man alive!" seizing the embroidered abominations, and holding them aloft—"They would n't go round a cat."

The doctor smiled, and cleared his throat in his most professional manner, but he was mixing a powder now for the writhing invalid, and so made no answer.

"I'll be hanged," the excited husband went on, still surveying the corsets, "if I don't think I've got the key to a thousand and one different ailments; and is it possible, Doctor, that you, whose business it is to know the 'human form divine,' can tell me that such things as these do no harm?"

"The chief trouble with your wife, my dear fellow," said the Doctor blandly, and with that appearance of perfect frankness which is so apt to carry conviction with it, "is her extreme sensitiveness, and the tendency to nervous excitability. This condition is naturally intensified now, you know, and the poor little corsets play a very insignificant part, if any, in the present break-down."

This was plausible; but the strange report of the suddenly liberated steels had furnished indisputable testimony to Mr. Westbrook's logical mind of the truth of his convictions. To say that such ignorant and outrageous treatment can have the effect of influencing the unconscious victim against the mother who should have given it every possible chance for healthful and harmonious development, is to make a statement impossible of proof. But it is equally impossible to prove the reverse. "If a woman is sickly, she is likely to bear sickly children," physicians tell us; "and there is something in the heredity theory." But that the unborn child, from any subtle mental or psychological cause, can be so moved upon as to be actively repelled from its mother during all the after years, is an idea so ridiculous and fantastic as to excite the keenest contempt. At any rate, this child, like many another we could mention, was never comfortable in her mother's presence; and when she grew old enough to reason about this, to her mind, utterly unnatural state of things, she was conscious of a deep-seated and ineradicable grudge. As soon as she could manage her baby hands, she struck her mother, and continued to strike her until she came to an age when she was able to distinguish between right and wrong. Her mother was the only person on earth with whom she could not get along peaceably.

Now on the night of Mr. Westbrook's experiment, the troublesome mamma was in another part of the house. Her father, who never bothered her, and often removed obnoxious safety pins, and gave her a chance to breathe deeply and kick freely, was by her side. The air was cool enough and pure enough to suit her little ladyship, and the consequence was the first really good night of her life. This virtually settled the matter with the father. Mrs. Westbrook demurred and rebelled. "The child was perfectly exhausted with its paroxysms of shrieking, and would have slept anywhere," she said. Why was it that her husband had no confidence in her opinions? she asked. She had been perfectly wretched all night, thinking of her baby in a room with an open window.

"And you would have been perfectly wretched if the baby had screamed all night," the gentleman replied; "so it seems to be only a choice of evils, after all, as far as you are concerned. For the child's sake I must insist upon making a thorough trial of my experiment. If she continues to sleep well, I shall consider that she is the best judge of what she wants and needs, and we must be governed accordingly."

"That is a nice way to begin with a child," Mrs. Westbrook remarked wittingly. "She must be the judge of what she wants, indeed! How long do you think it will take at that rate for her to rule the whole house?"

"She has done that, my dear, ever since she drew her first breath," the gentleman responded good naturedly; "and it's my opinion," he added, "that she'll rule the whole town if her wishes are not deferred to. But, Louise," this a little more seriously, "we must not lose sight of the fact that the child's instincts all seem to be healthy and legitimate. You see she rejects your drugs and declines your close room. There is certainly nothing vicious about that."

"It is my opinion that we shall have our hands full and our hearts full," said the troubled mother. "She is now eighteen months old, and I think it high time that we commence to break her of some of her tricks."

"The trick of preferring pure air to foul, or milk to castor oil?" Mr. Westbrook inquired.

"Oh! if you are going to be sarcastic, that settles it," the lady replied.

"I really asked for information," the

husband answered. "The tricks that you so deplore all seem to me of that character. I tell you, she is a healthy little animal."

"The doctor did n't think I was strong enough to nurse her, and I was willing enough to give it up for some reasons," Mrs. Westbrook remarked, after a pause in which both father and mother had done considerable thinking. "For one thing, a nursing mother can never look like a lady. Her clothes are always more or less soiled and ill-fitting. Still, notwithstanding all that, the doctor said I felt better during that process than I have felt before for a long time, and I think that child should have been starved to it. If she had been made to nurse, I should have had more for her; but she was only three months old when she refused it altogether. That was one trick that she should have been broken of. But she was humored in that the same as she is in other things."

"And you are quite sure that you felt better while she was nursing?"

Another idea was working its way into Mr. Westbrook's head.

"You remarked it yourself, George, and so did others," the lady replied.

"But the baby did not thrive," said the gentleman speculatively. "She was ill and nervous, screamed every time she was brought to the breast, till she almost went into spasms, and finally weaned herself. That she knew what was best for her was proved by her immediately picking up as soon as her diet was radically changed. Louise, it is an awful thought, but what if the reason of your gain in health could be traced to the removal of certain physical impurities from your system by means of this fluid!"

"I tell you, George Westbrook, that child of ours is a creature of whims, and that was one which should have been fought out," Mrs. Westbrook replied, entirely ignoring her husband's proposition.

"But what if this theory should be the correct one?" Mr. Westbrook persisted. "There surely must have been some reason for your feeling better, and the child's growing steadily ill and emaciated."

"She had had a taste of cow's milk, and preferred it to mine," the lady replied. "Other notional children have done the same thing."

"Why will you persist in ignoring the fact of the child's improvement in health as soon as her diet was changed?" the gentleman inquired. "If you only would keep to the point, Louise, we might once

in a while get some satisfaction out of our talks."

"I don't pretend to be able to explain it," his companion responded; "but I suppose the child improved because she had carried her point."

Mr. Westbrook looked at his wife, who was engaged in embroidering a street suit for the unsatisfactory baby, and came nearer making an offensive remark than ever before since his marriage. But he bethought himself in time. He was aware of his companion's inability to carry on a process of reasoning before he made her his wife, and he remembered that this had been an added charm. Her naive and unexpected deductions from premises that clearly pointed to totally opposite conclusions, had had a singular fascination for him. She was beautiful; she was graceful and accomplished. She loved him and he loved her. The line had to be drawn somewhere between the masculine and feminine intellect, and Mr. Westbrook drew it at logic, and thought he was safe.

"I'll tell you what you do, George," the lady resumed. "Go and take dinner with Mr. and Mrs. Miller. They are very learned, and can tell you everything you want to know, and you can regale yourself at the same time with pea soup and graham scones, and apple sauce. How I should enjoy seeing you try to go through with that bill of fare!"

"Louise,"—another idea was forcing itself into Mr. Westbrook's mind,— "I'd like to know where you'll find a family in this town as healthy as the Millers? Their children are regular little pine knots. If this is the result of the diet which you make so much fun of, why then they are wiser than we are. There is no dodging that."

As Mr. Westbrook opened the door into the hall, an odor of spices and boiling cider saluted his appreciative olfactories.

"Mince pies?" he inquired with a smile.

"Yes, mince pies."

"You are going to make the pastry, are you not?"

"Yes, and put on the finishing touches; but the Millers don't believe in mince pies, George."

"They'll be good, I know by the smell," Mr. Westbrook remarked as he closed the door. Old habits held him closely, so closely that in the anticipation of a batch of his favorite pies, he entirely lost sight of the vital questions that had so moved

him. Mrs. Westbrook smiled. "Give a man what he wants to eat, and he'll never be *very* troublesome," she said softly to herself.

TO BE CONTINUED.

### HANNAH AS A MOTHER.

BY J. R. MILLER, D. D.

It was a long while ago that she lived, and the fashions have changed so greatly, and there has been such advancement in all the arts of life since she brought up her boy, that it may seem idle to study the story in these wise modern days; yet the little time necessary to look at the old picture may not be altogether wasted.

For one thing, Hannah, as a mother, was enthusiastic. She was not one of those women who think children undesirable incumbrances. She did not consider herself, in her earlier married years, particularly fortunate in being free from the cares and responsibilities of motherhood. She believed that children were blessings from the Lord, and that motherhood was the highest honor possible to a woman; and she sought, reverently and very earnestly, from God, the privilege of pressing a little child to her bosom, and calling it her own. This line in the ancient picture we must not overlook in these days, when children are not always looked upon as blessings from the Lord, nor even always welcome.

Another thing: when Hannah's child came, she considered it a part of her religious duty to take care of it. Instead, therefore, of going up to Shiloh to attend all the great feasts, as she had done before, she staid at home for some time, to give personal attention to the little one that God had given her, and that was still too young to be taken with safety and comfort on such long journeys. No doubt she supposed she was worshiping God just as acceptably in doing this, as if she had gone up to all the great meetings. And who will say that she was not right? A mother's first obligations are to her children. She can have no holier or more sacred duties than those which relate to them. No amount of public religious service will atone for neglect of these. She may run to temperance and missionary meetings, and abound in all kinds of charitable activities, and may do very much good among the poor, carrying blessings to many other homes, and being a blessing to other people's children,

through the Sunday-school or Mission-school; but if she fails meanwhile to care for her own children, she can scarcely be commended as a faithful Christian mother. She has overlooked her first and most sacred duties, to give her hand and heart to those that are but secondary to her. Hannah's way evidently was the true one. A mother had better be missed in the church, and at the public meetings, than be missed in her own household. Some things must be crowded out of every earnest life; but the last thing to be crowded out of a mother's life should be the faithful and loving care of her children. The preacher may urge that every one should do something in the general work of the church, and the superintendent may appeal for teachers for the Sabbath-school; but the mother herself must decide whether the Master really wants her to take up any religious work outside her own home. For the work there she surely is responsible; for that outside she is not responsible until the other is well done.

Another thing about Hannah was, that she looked after her own baby. She did the nursing herself. She did not go to an intelligence office and hire a foreign woman at so much a week, and then commit her tender child to her care, that she herself might have "a free foot" for parties and calls and operas, and social and religious duties. She was old-fashioned enough to prefer to nurse her own child. She does not seem to have felt it any great personal deprivation to be kept at home rather closely for a year or two on this account. She even appears to have thought it a high honor and distinguished privilege to be a mother, and to do, with her own hands, a mother's duties. And when we think what this child became in after years, what the outcome was of all her pains and toils, it certainly looks as if Hannah was right. It is not likely she ever regretted, when she saw her son in the prime and splendor of his power and usefulness, that she had missed a few parties and other social privileges in nursing and caring for him in his tender infancy. If anything, even half so good, comes ordinarily out of faithful mothering, there are certainly few occupations open to women, even in these advanced nineteenth century days, which will yield such satisfactory results in the end as the wise and true bringing up of children. Many women are sighing for distinctions in the professions, or as authors, or artists, or singers; but, after all,

is there any distinction so noble, so honorable, so worthy, and so endearing as that which a true woman wins when she has brought up a son who takes his place in the ranks of good and true men? Could Mary, the mother of Jesus, have found any mission, in any century, greater than that of nursing and caring for the holy Child that was laid in her arms? Or, if that example be too high, could the mothers of Moses, of Samuel, of Augustine, have done more for the world if they had devoted themselves to art, or poetry, or music, or a profession?

Perhaps Hannah was right, and if so, the old-fashioned motherhood is better than the new, and the mother herself is her own child's best nurse. A hired woman may be very skillful, but surely she cannot be the best one to mold the soul of the child, and awaken and draw out its powers and affections. The mother may thus be left free to pursue the fashionable round of dining and dressing, of amusements and social engagements, but what is coming, meanwhile, of the tender life at home in the nursery, thus left practically motherless to be nurtured and trained by a hireling stranger? And what comes, besides, of the holy mission of motherhood which the birth of every child lays upon her who gave it life? A recent writer, referring to this subject, asks: "Is there any malfeasance of office in these days of dishonor like unto this? Our women crowd the churches to draw the inspiration of religion for their daily duties, and then prove recreant to the first of all fidelities, the most solemn of all responsibilities. We hear fashionable young mothers boast that they are not tied down to their nurseries, but are free to keep in the old gay life—as though there were no shame to the soul of womanhood therein." Such a boast is one of the saddest confessions a mother could make. The great want of this age is mothers who will live with their own children, and throw over their tender lives all the mighty power of their own rich, warm, loving natures. If we could have a generation of Hannahs, we should then have a generation of Samuels growing up under their wise, devoted nurture.

There is one other feature in this old-time mother that should not be overlooked. She nursed her child for the Lord. From the very first, she looked upon him as God's child, not hers, and considered herself only God's nurse, whose duty it was

to bring up the child for a holy life and service. It is easy to see what a dignity and splendor this gave to the whole toilsome round of motherly tasks and duties which the successive days brought to her hand. This was God's child that she was nursing, and she was bringing him up for the Lord's service in two worlds. Nothing ever seemed drudgery, no duty to her little one was hard or distasteful, with this thought ever glowing in her heart. Need any woman have loftier or more powerful inspiration for toil and self-forgetfulness than this?

And is there any mother who may not have the same inspiration, as she goes through her round of commonplace nursery tasks? Was Samuel God's child in any higher sense when Hannah was nursing him, than are the little ones that lie in the arms of thousands of mothers today? In every mother's ears, when a baby is laid in her bosom, there is spoken by the breath of the Lord the holy whisper, if she but have ears to hear the divine voice, "Take this child, and nurse it *for me*." All children belong to God, and he wants them brought up for holy missions. Every mother is, by the very lot of motherhood, when it falls upon her, consecrated to the sacred service of nursing, molding, and training an infant life for God. Hannah understood this, and found her task full of glory. But how many, even among Christian mothers, fail to understand it, and unsustained by a consciousness of the dignity and blessedness of this high calling, look upon its duties and self-denials as painful tasks, a round of toilsome, wearisome drudgery!

It will be well worth while for every mother to sit down quietly beside Hannah, and try to learn her secret. It will change the humblest nursery into a holy sanctuary, and transform the commonest, lowliest duties of motherhood into services as splendid as those the radiant angels perform before the Father's face.—*Sunday-School Times*.

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—Men who are at the pinnacle of fortune should ever bear in mind that they are not out of the reach of vicissitudes.

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—The reptile in human form should be avoided with care; you may rub out the slime of the snail, but not the slime of a slanderer.



## Popular Science.

—Scientists place the limit of divisibility at 146,000 lines to the inch.

**A Remarkable Tree.**—Prof. Virchow, of Berlin, recently exhibited to the Medical Society of that city a photograph of a huge plane-tree growing in the little island of Cos, in the Grecian Archipelago. The interest attaching to this tree and to its island arises from the fact that Hippocrates, "the father of medicine," dwelt in Cos; and, it is alleged, held consultations under the shade of this tree. The tree stands in the market-place of the town of Cos, its huge branches being supported by marble pillars. The tree has thus become elaborated, so to speak, into a veritable shrine of Hygeia; and it would certainly lay claim to the veneration of the world, could the fact of its having formed the temple of Hippocrates be fully substantiated. "The father of medicine" was born in Cos about 460 B. C., and tradition credits him with being the seventeenth in descent from Æsculapius himself.

**House-Plants and Health.**—It seems to be a common belief that house-plants are, in some mysterious way, detrimental to health when cultivated in living-rooms. A writer in a contemporary journal asserts that they are beneficial to health if grown in a well-lighted sitting-room, but injurious in a sleeping-room, for the following reason: "The leaves of plants, sometimes compared to animal lungs, are furnished with little pores by which they inhale carbonic acid gas, a combination of carbon and oxygen. This gas, by the agency of light, is decomposed, the carbon, that principle of the air which is detrimental to man, being made use of by the plant, and the oxygen exhaled or thrown off. This process, which is called respiration, occurs only in the day-time. Deprived of sunlight, the leaves absorb oxygen, and evolve carbonic acid gas."

**Prehistoric Remains.**—A large Indian mound near the town of Gasterville has recently been opened and examined by a committee of scientists sent out from the Smithsonian Institute. At some depth from the surface a kind of vault was found in which was discovered the skeleton of a giant measuring 7 feet 2 inches. His hair was coarse and jet black, and hung to the waist, the brow being ornamented with a copper crown. The skeleton is remarkably well preserved. Near it were also found the bodies of several children of various sizes, the remains being covered with beads made of stone of some kind. Upon removing these the bodies were seen to be inclosed in a network of straw or reeds, and beneath this was a covering of the skin of some animal. On the stones which covered the vault were carved inscriptions, and these, when deciphered, will doubtless lift the veil that now shrouds the history

of a race of giants that at one time undoubtedly inhabited the American continent. The relics have been carefully packed, and forwarded to the Smithsonian Institute, and they are said to be the most interesting collection ever found in the United States. The explorers are now at work on another mound in Bartow County, Pennsylvania.—*Sc. Am. Supplement.*

**An Obstinate Metal.**—Platinum, a rare metal which rivals gold in value, melts with the greatest difficulty of any of the metals. According to a writer in the *Manufacturer's Gazette*, a temperature that will make steel run like water and melt down fire-clay has absolutely no effect upon it. You may put a piece of platinum wire no thicker than human hair into a blast furnace where ingots of steel are melting down all around it, and the bit of wire will come out as absolutely unchanged as if it had been in an ice-box all the time.

No means has been discovered for accurately determining the melting temperature of platinum, but it must be enormous. And yet, if you put a bit of lead into a crucible with the platinum, both metals will melt down together at the low temperature that fuses the lead; and if you try to melt lead in a platinum crucible, you will find that as soon as the lead melts, the platinum with which it comes in contact also melts, and your crucible is destroyed.

Pure platinum is soft as silver, but it is usually alloyed with iridium, which makes it hard and brittle. In a pure state, platinum can be drawn into a finer thread than any other metal. Wire less than one two thousandth of an inch in diameter is frequently made of it.

**A Water-Telescope.**—An exchange recommends to those who desire to study the habits of living fish and other forms of marine life in their wild state, a very simple instrument called the water-telescope, which is scarcely known in this country, but is in constant use by the Norwegian fishermen "in their herring and cod fisheries, who often thereby discover shoals of fish that would otherwise escape their nets. On the surface of the water in the sea, and also most rivers, there is generally a ripple, which prevents the bottom's being seen; it is to get rid of this ripple that the water-glass is so useful. There are three forms of the water-glass, namely, an ordinary bucket or barrel with the bottom knocked out; secondly, a piece of tin of a funnel shape, about three feet long and nine inches in diameter at the broad (or bottom) end, and large enough at the top to accommodate the observer's eyes; into the broad end should be inserted a plate of strong glass, and some lead to weigh it down; thirdly, the simplest way is to get a tin, or zinc tube like a map-case. This should be about three feet long and three inches in diameter. The bottom of this should also have glass, and be weighted."

—The American no longer has to go abroad to experience the sensation of an earthquake. Nearly every part of the country has been shaken up within the last three months.



BATTLE CREEK, MICH., FEBRUARY, 1885.

J. H. KELLOGG, M. D., EDITOR.

TERMS, \$1.00 A YEAR.

**A WORD ABOUT SALT.**

AN exchange remarks as follows respecting the use of salt:—

“Some English cranks have now discovered that salt is a dreadful thing to take into one’s stomach, and declare their intention of abandoning its use. To these persons the London *Lancet* devotes a paragraph, doubtless hearing that, unless promptly suppressed, they will organize a society, and hold annual conventions. ‘Common salt,’ says the *Lancet*, ‘is the most widely distributed substance in the body: it exists in every fluid and in every solid; and not only is it everywhere present, but in almost every part it constitutes the largest portion of the ash when any tissue is burnt. In particular, it is a constant constituent of the blood, and it maintains in it a proportion that is almost wholly independent of the quantity that is consumed with the food. The blood will take up so much and no more, however much we may take with our food; and on the other hand, if none be given, the blood parts with its natural quantity slowly and unwillingly. Salt, being wholesome, and indeed necessary, should be taken in moderate quantities, and abstinence from it is likely to be injurious.’”

We rarely advise the entire disuse of salt, although we have found no use for it, dietetically, for many years, and are not aware that we have suffered any inconvenience from the disuse of this common condiment. We are constantly insisting, however, that a less quantity should be used than is ordinarily employed in cooking, and by most persons at the table.

Salt is a mineral substance which cannot be assimilated, and, contrary to the statement of the medical authority quoted above, constitutes a very insignificant part of the solid tissues of the body, as can be ascertained by any one who will take the trouble to examine the tables giving the chemical constituents of the body, which are to be found in any text-book on human physiology. That the blood does take up more than a certain definite quantity of salt is shown by the fact that the quantity of common salt found in bile, urine, sweat, and other excretions, is in direct proportion to the amount taken with the food.

One question which we would like to have our physiologist, or any other medical authority, answer is this: Seeing that the Creator placed in our fruits, grains, and other foods the proper proportion of phosphates, carbonates, and all other mineral ingredients, with the single exception—according to their theory—of chloride of sodium, why did he make so grave an error as to omit this element, which, according to their notion, is so important and essential for the maintenance of life?

We do not question the utility in the vital economy of chloride of sodium, yet we would question the usefulness of phosphate and carbonate of lime. But all of these elements are found in both animal and vegetable food, and in sufficient quantity for the support of animal and vegetable life, as is seen by the fact that carnivorous animals never eat salt, and a large share of vegetable-eating animals also abstain from salt, such as the squirrel, rac-

coon, beaver, the whole family of apes, the sloth, and other fruit-eating animals, and the entire class of birds.

Many herbivorous animals show a natural fondness for salt. This may be an acquired appetite, however, as we think it probably is with man. Travelers tell us that in some parts of the world herbivorous animals do not eat salt, there being none accessible to them, as in Central Africa; and it is certainly difficult to understand where a reindeer, in the frozen regions of the North, would go in search of the saline element.

We are not prepared to say that a minute quantity of salt can be charged with great mischief to the vital economy; but we feel confident that the large use of this chemical substance, which is indulged in by the majority of civilized people, is decidedly detrimental to health, imposing, as it does, a great amount of extra labor upon the kidneys, liver, and skin, unduly irritating and exciting the various structures of the body during its transit through them.

#### MEDICAL SCIENCE IN ABYSSINIA.

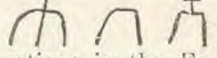
FOR the following account of some of the remarkable customs of people who, at the present day, are scarcely better known to the rest of the world than at the time the paragraphs quoted were written, we are indebted to our esteemed English friend, whose communication has for some weeks been hiding in our editor's drawer, and has just come to light.

Every invalid reader will certainly feel grateful that Abyssinian methods of medical treatment are less popular in this country than they were half a century ago.

"Their manner of Administering *Physick* is most Deplorable. They cure Men by cutting and burning, as they do Horses. They cure the *Yellow Jaundies* by applying a hot burning Iron, in manner of a Semicircle, toward the upper end of the Arm, laying a little Cotton upon the Wound, that the Humour may issue forth, so long as the Disease remains. In

most Distempers, every person is his own Physician, and uses such Herbs as he learnt were useful from his Parents. Some are of Opinion that it is not a Pin matter, whether they make use of *Physicians* or Apothecaries or no, not believing it worth their while to be recovered at so great Expences. If the King be sick, they come to him, ask him, as if it were out of pity, *what he ayles, and what is his Distemper?* And if any one have been ill of the same Distemper, he tells what did him good, deeming the same Remedies applicable to all Constitutions. If a Pestilence chance to break out, they leave their Houses and Villages, and retire with their Heards into the Mountains, putting all their Security in flying from the Contagion. *Tertian Agues* they Cure, by applying the *Cramp-fish* to the Patient, which is an unspeakable Torture. *Wounds* they Cure by the help of *Myrrh*, which is very plentiful among them."

I send the foregoing to the editor of GOOD HEALTH with all the caps and commas of the very learned author on the languages and customs of the Abyssinians, or

Habash—  From my own observations in the East it is probable that medical science has advanced but little in the far-off land of Abyssinia. Burning the arm\* for a high Syrian fever is common to-day in the by-ways of Eastern nations. WM. M. JONES.

*British Museum.*

NOTE. In the year 1815 Capt. James Riley, commander of the brig Commerce, was wrecked upon the western coast of Africa, and spent three years among the wild Ishmaelites of the great Saharan Desert. In his narrative, which delineates quite fully the customs and habits of the Bedouins, he tells how he was once treated when sick—apparently unto death. Several of the aged women of the clan stripped him nearly nude, and then applied the blade of a scimeter, heated very hot, to his back, and sides, and arms, and legs, and head. And the Captain observed, that strange as it might appear, though suffering the most piercing pains, his distresses at once subsided, and in due time he recovered. But the remedy was nearly as painful as the disease, for wherever the hot blade of the scimeter was applied to the flesh, the skin was completely seared.—Ed.

—A London society paper says it takes one hundred and fifty years out of doors to make a beauty.

**CONDIMENTS AND INDIGESTION.**

THE scientific world is just waking up to the mischievous results of the dietetic use of substances which burn and sting in mouth and stomach, against which dietetic reformers in this country have been declaiming ever since the time of Sylvester Graham, and perhaps for a longer period. The wave of reform has at last reached England, the land of rich gravies, savory sauces, and plum puddings, and that eminent professor of the art of *cuisine*, in a recent article in *Knowledge*, republished in this country in the *Popular Science Monthly*, thus discourses on this spicy topic:—

“Cayenne pepper may be selected as a typical example of a condiment properly so-called. Mustard is a food and condiment combined; this is the case with some others. Curry-powders are mixtures of very potent condiments with more or less farinaceous materials, and sulphur compounds, which, like the oil of mustard, onions, garlic, etc., may have a certain amount of nutritive value.

“The mere condiment is a stimulating drug that does its work directly upon the inner lining of the stomach, by exciting it to increased and abnormal activity. A dyspeptic may obtain immediate relief by using cayenne pepper. Among the advertised patent medicines is a pill bearing the very ominous name of its compounder, the active constituent of which is cayenne. Great relief and temporary comfort are commonly obtained by using it as a “dinner-pill.” If thus used only as a temporary remedy for an acute and temporary, or exceptional, attack of indigestion, all is well; but the cayenne, whether taken in pills, or dusted over the food, or stewed with it in curries, or any otherwise, is one of the most cruel of slow poisons when taken *habitually*. Thousands of poor wretches are crawling miserably toward their graves, the victims of the multitude of maladies of both mind and body that are connected with chronic, incurable dyspepsia, all brought about by the habitual use of cayenne and its condimental cousins.

“The usual history of these victims is that they began by overfeeding, took the condiment to force the stomach to do more than its healthful amount of work, using but a little at first. Then the stomach became tolerant of this little, and demanded more, then more, and more, and more, until at last inflammation, ulceration, torpidity, and finally the death of the digestive powers, accompanied with all that long train of miseries to which I have referred, was the result.”

**RICHARDSON ON TOBACCO-USING.**

THIS eminent English physician has done much to forward the cause of temperance by his unflinching advocacy of total abstinence from tobacco as well as liquors. The following is one of his latest utterances on the subject:—

“In a speech recently delivered in Exeter Hall, on the occasion of the establishment of the National Society for the Suppression of Juvenile Smoking, Dr. B. W. Richardson, F. R. S., said: In my earlier life I was not a smoker; I went through all the arduous work of a medical student, by being present at the operations in large hospitals, in studying anatomy in the dissecting and post-mortem rooms, and in the fever hospitals, and I never smoked, though I went through my work with great facility. Later on I learned to smoke, and continued to do so for many years. The whole of that time I was dyspeptic from smoking. At length I resolved to give it up. It was hard work to do so, but I eventually succeeded, and have never been more thankful than for the day on which it was accomplished. I gave up wine, beer, and every other alcoholic drink with infinitely less trouble than smoking. It is very difficult indeed to abandon this pernicious habit of smoking. I am informed by jail surgeons that their prisoners crave for the tobacco far more than anything else they are deprived of, which shows that the habit is one which is very inveterate when once established.

“Smoking is to a certain extent connected with drinking. Very few persons smoke without taking spirits. I admit there are some who are exceptions to this, for I could name some friends of mine who are engaged in very active work in the temperance cause, and yet are smokers. They are so strong minded as to keep from the alcohol. But these exceptions are very few in number; and we generally find that when a man smokes, he has a desire for alcohol to relieve him of the sinking sensation which the smoking produces. While smoking has not the same injurious effect upon the system as drinking, it produces a disease which is functional in its character. Persons who smoke, experience a faintness, followed by nausea, which alcoholic drinks often allay. On this point I can speak from personal experience. I should have been led into the field of total abstinence five years before I was, had it not been for the smoking habit which I had contracted.

“Tobacco stops the proper working of the digestive powers; it causes an irregular circulation, so that there is not a correct distribution of blood; and it deranges the whole nervous system. If it were a fact that all our young women and young men were to smoke, and continue the habit until they became fathers and mothers, their offspring would be so stunted and little as to be thoroughly incapable of carrying out the duties required by our generation. We cannot praise our mothers too much for the fact that they have not become smokers. They have conferred a boon upon us by this forfeiture of indulgence, of which we cannot speak with too much earnestness and warmth; and now, happily, we find men who can efficiently carry out a movement which is certainly one of the best national movements that could be started, and one which is absolutely needed. We feel ashamed when we walk along our streets, and see boys of tender age using the pipe; and more so when we find friends of temperance and hard workers in that cause

saying, ‘If you cannot drink, you may smoke; that will do you no harm.’”

#### **DONKEY WET-NURSES.**

THE fondness of the adult Frenchman for horse-steak is evidenced by the fact that something more than a million and a half pounds of horse, mule, and donkey flesh are consumed annually in the city of Paris alone.

Only the ingenuity of a Frenchman could have devised the plan for giving the toothless infants of the metropolis an opportunity to indulge in the same sort of asinine diet.

According to a recent number of the *Gazette Hebdomadaire de Médecine et de Chirurgie*, in connection with one of the hospitals of Paris there is to be found a Nursery for Diseased Infants, in which she-asses are used as wet-nurses. The fact was brought to light by a recent outbreak, among the four-footed mothers, of an epidemic of horse-pox, a disease identical with kine-pox. Investigation of the disease showed that the epidemic originated from a child that had been vaccinated. Cow-pox was produced in two cows by inoculation from one of the asses.

**Object-Teaching in Dress Reform.**—According to one of our English exchanges, the English Dress Reformers adopted, during the Health Exhibition in London, a novel means of illustrating one of the evils of fashionable dress, which our contemporary describes as follows:—

“In the Health Exhibition in London, one of the warning horrors is the lacing process to which a waxen figure is subjected for the purpose of divulging the worst secrets of the ladies’ torture chamber. The exact number of inches which a woman may with proper self-respect measure around the waist is decided by a law, temporary, let us hope, but immutable as those of the Medes and Persians. The sufferings of the waxen dummy, inaudible save for the creaking of the machinery, which in the forcible compression

of the waist might well be mistaken for groans, are said to be quite terrible in their realism. But the unsophisticated of the fair, and numbers of the opposite sex, are the only ones that care a whit for the spectacle. To be beautiful, one must suffer; but to be fashionable, no torture is too great to deter competition for this noble end."

**Something for Coffee Drinkers to Think Of.**—Everybody knows that the ground coffee sold in the stores contains almost everything else, but is quite above suspicion of adulteration with the genuine coffee-berry. Everybody, however, does not know that in the purchasing of unground coffee they are exposed to the same liability to fraud, and even of serious injury to health.

According to the *Scientific American*, the Brooklyn health inspectors recently found several well-known coffee dealers who were in the habit of doctoring cheap Central American coffee so as to make it resemble and sell for true Java. This was accomplished by polishing the coffee berries in rotating cylinders, with the addition of such stuffs as chromate lead, Silesian blue, yellow ochre, Venetian red, drop black, burnt umber, charcoal, soap-stone, chalk, and Prussian blue. Some of these substances contain lead, copper, and arsenic; and when the doctored coffee was subjected to chemical test, these metals were found in poisonous quantities. The Health Board promptly ordered the discontinuance of this mode of coffee adulteration, and the enterprising dealers will now have to move across the river into New Jersey or some other State where their nefarious traffic may be conducted without interference of the authorities.

**English Meat Pies.**—According to the *N. Y. Sun*, a pleasant little story is related by a correspondent of an English agricultural journal. A few evenings back a constable at East Retford observed seven worn-out horses proceeding to the station

from the direction of Doncaster. A cart accompanied them, in which were the carcasses of three dead horses. It was mentioned by a man who was with them that the whole lot were consigned to Hertford, where they were to be converted into meat pies for the London market. One of the animals could only breathe through a tube fixed in his throat.

Some time ago a San Francisco butcher was convicted of converting sundry unfortunate cats into sausage; and there is no doubt that the use of diseased meat, as well as the flesh of animals not usually considered fit to be eaten, is very largely carried on in this country as well as in England.

**How to Smoke a Cigar.**—Two centuries ago Smoking Schools were as common in London as Riding and Swimming Schools are at the present day. Precise instruction, and a thorough course of training in the use of the filthy weed, were considered essential to the accomplishment of the English dude of two centuries ago.

The absence of such facilities at the present day leads a country doctor to inquire "how to smoke a cigar," to which the editor of a Chicago paper makes the following reply: "Our knowledge is somewhat limited, but we should think the cigar ought to be hung up in the smoke-house, and a fire built under it."

**Canaries and Scarlet Fever.**—An Aberdeen doctor reports a case in which four canaries kept in a room with two children who were suffering with scarlet fever, were taken with the same disease, one of them dying with all the symptoms of it. It is important that the public should be made aware of the fact that this grave disease may be carried by means of other domestic pets; at least the evidence is very strong that this is the case.

**Female Smokers.**—A London cigarette manufacturer states that the smoking of cigarettes is growing to be very common among the women of that city.

**Caterpillar Diet.**—An African traveler, in describing the dietetic habits of the Bantus, a tribe of negroes inhabiting South-western Africa, mentions the fact that they are ready to starve rather than eat frogs or other reptiles, which the French or American epicure considers a delicacy; but they have a prodigious appetite for caterpillars, white ants, and crickets. "The black caterpillar is harvested whenever it appears in considerable numbers, large parties of the negroes leaving their villages and camping for weeks in the wilderness to secure the crop, which is preserved for use by pressing out the intestines, drying before a fire, and rolling in fresh leaves."

**Boiled Water.**—Boiling water is one of the best of safe-guards against dangerous impurities, and should always be employed when there is the slightest reason to suspect contamination of the water supply, if its source is not known. Boiling not only destroys organic impurities,—by far the most dangerous of all,—but removes the excess of lime which it may contain, and drives out the ammonia and other gases which it may have absorbed from various sources.

Water which has been boiled for some time is less palatable than unboiled water, having a somewhat flat taste. If this is a serious objection to its use, its natural flavor may be restored by agitating it in the air, as by pouring from one vessel to another, for some little time.

**Hard on the Doctors.**—No class of professional men furnish so much material for witticisms at their own expense as doctors. For example, an exchange tells of a remarkably honest doctor who sent in a certificate of death the other day with his name signed in the space reserved for "cause of death."

Another exchange gets off the following joke on a newly fledged *medicus*:—

"Well," remarked a young M. D., just from college, "I suppose the next thing will be to hunt for a good location, and

wait for something to do, like 'Patience on a monument.'"

"Yes," said a bystander, "and it won't be long after you do begin before the monument will be on the patients."

And here is another one in which the patient participated:—

"Well, madam, how's your husband to-day?"

"Why, doctor, he's no better."

"Did you get the leeches?"


"Yes, but he only took three of them raw—I had to fry the rest."

**Three Tobacco-Users.**—The *Christian at Work* is no friend of the noisome weed. In a recent issue it remarks that "Only three animated beings use tobacco,—a noisome and poisonous worm that lives on the plant, the wild goat which feeds on its leaves, and the human beings with depraved taste, who chew, snuff, and smoke it."


**A New Folly.**—According to a contemporary, some silly, fashionable creatures of New York have discovered that white teeth are not sufficiently elegant to ornament the mouth of a Gotham belle, and have inaugurated the fashion of painting them pink. Teeth painting was introduced by the dusky belles of Central Africa, who stain their incisors black. What next?

**Malarial Germs.**—Prof. Tommasé Crudelelli, who has become world famous by his investigations of the diphtheria poison, demonstrated by microscopical specimens at the International Medical Congress, the effect of malarial germs upon the blood-corpuscles. The corpuscles are destroyed, being gradually broken into fine particles.

—According to a German histologist, the human brain contains about 300,000,000 cells. The life of a brain cell is about sixty days, so that five millions die every day, or 200,000 every hour, or nearly 35,000 a minute.



## DOMESTIC MEDICINE.



**Lemons as a Remedy for Malarial Diseases.**—While we do not approve of the constant drugging to which people living in malarious regions are often subjected, to cure *present* malaria, antidote the effects of *past* malaria, and prevent *future* malaria, we feel sure that the employment of so simple a remedy as lemons, or indeed of almost any remedy not positively and permanently harmful, is decidedly preferable to the old-fashioned way of “wearing the disease out,” which often resulted in wearing the patient into dropsy or consumption, and ultimately into the grave. Nevertheless, let it be remembered that whatever medicinal remedy is employed, be it ever so simple, it must be accompanied and followed by such means as will remove the poison from the system, such as eliminative baths, and copious hot-water drinking.

The following remarks upon the subject we quote from the *Detroit Lancet*:—

“As a popular remedy, the use of lemon has had considerable influence among the laity in certain portions of the world.

“Lately it has been brought into prominence by Dr. Conrad Tommasi Crudeli, Professor of Hygiene at the University of Rome, Italy. In his address before the Copenhagen International Medical Congress, he tells us that the decoction is prepared by cutting up one lemon, peel and all, into thin slices, which are placed in three tumblers of water, and the whole boiled down to one glassful. It is then strained through linen, squeezing the remains of the boiled lemon, and set aside for some hours to cool. The whole amount of the liquid is then taken, fasting. Lemon-juice or a decoction of lemon-seeds is used in Greece and North Africa as a remedy for malarial fevers of moderate intensity. In Guadeloupe a decoction of the bark from the root of the lemon-tree is used for the same purpose. These popular practices would seem to indicate that there is some anti-malarial virtue in the lemon-tree. While it is useful in acute malarial disease, it is especially valuable in chronic cases.

“The doctor, being convinced that the remedy had a positive value, persuaded some proprietors in the Roman Campagna to try it with their employees. The good effects here were

conclusive. From these he gradually persuaded practitioners to test the treatment. The result of these quite extensive observations confirmed his first expectations.

“In the interest of humanity we shall hope that further observations will confirm the anticipations of the distinguished Roman professor. If decoction of lemons will cure malarial poisoning, it will be a relief to the cinchona trees.”

**Medical Uses of Fruits.**—Dr. Lewis, of Philadelphia, summarizes the uses of fruits in relieving diseased conditions of the body. It should not be understood that edible fruits exert medicinal effects in the same way as drug remedies. They simply encourage the natural processes by which the several remedial processes which they aid are brought about.

“Under the category of *laxatives*, oranges, figs, tamarinds, prunes, mulberries, dates, nectarines, and plums may be included; pomegranates, cranberries, blackberries, sumach berries, dewberries, raspberries, barberries, quinces, pears, wild cherries, and medlars are *astringent*; grapes, peaches, strawberries, whortleberries, prickly pears, black currants, and melon seeds are *diuretics*; gooseberries, red and white currants, pumpkins, and melons are *refrigerants*; and lemons, limes, and apples are *refrigerants* and *stomachic sedatives*.

“Taken in the early morning, an orange acts very decidedly as a laxative, sometimes amounting to a purgative, and may generally be relied on. \* \* \* \* \*

“Pomegranates are very astringent, and relieve relaxed throat and uvula. The bark of the root, in the form of a decoction, is a good anthelmintic, especially obnoxious to tapeworm.

“Figs, split open, form excellent poultices for boils and small abscesses. Strawberries and lemons, locally applied, are of some service in the removal of tartar from teeth. . . . Apples are correctives useful in nausea, and even sea-sickness, and the vomiting of pregnancy. They immediately relieve the nausea due to smoking. Bitter almonds contain hydrocyanic acid, and are useful in simple cough; but they frequently produce a sort of urticaria,



or nettle-rash. The persimmon, or *diospyros*, is palatable when ripe; but the green fruit is highly astringent, containing much tannin, and is used in diarrhea and incipient dysentery. The oil of the cocoa-nut has been recommended as a substitute for cod-liver oil, and is much used in Germany for phthisis. Barberries are very agreeable to fever patients in the form of a drink. Dutch medlars are astringent, and not very palatable. Grapes and raisins are nutritive and demulcent, and very grateful in the sick chamber. A so-called 'grape cure' has been much lauded in France and Switzerland for the treatment of congestions of the liver and stomach, enlarged spleen, scrofula, tuberculosis, etc. Nothing is allowed but water and bread and several pounds of grapes per diem. Quince-seeds are demulcent and astringent; boiled in water they make an excellent soothing and sedative lotion in inflammatory diseases of the eyes and eyelids."

**Remedies for Nose-Bleed.**—Here are two of the best remedies for this very common and sometimes dangerous affection:—

1. Have the patient raise both arms above the head. This will cause contraction of the blood-vessels in the arms, and simultaneously in the mucous lining of the nasal cavity. In mild cases, this remedy will uniformly succeed, with promptness. A dry handkerchief should be held at the nose in the meantime.

2. Administer a nasal douche of a hot solution of common salt. Dissolve a tablespoonful of salt in a quart of water at a temperature of 130°, and administer with a fountain syringe, inserting the nozzle of the syringe in the nostril which does not bleed, and allowing it to run out at the other.

**To Cure Ear Discharge.**—Cleanse the ear by means of a douche administered with a fountain syringe, allowing the fountain to hang only a few inches above the head. After the ear is thoroughly cleansed, carefully dry the canal by means of small bits of absorbent cotton wound about the end of a wooden tooth-pick. Then blow into the ear from a quill tooth-pick or a rubber tube a small quantity of finely powdered boracic acid. It is well to fill the canal quite full with the powder. Repeat this every other day. A few weeks' treatment will usually effect a cure in the most obstinate cases.

If there is impairment of hearing connected with the discharge, while the ear is being cleansed have the patient close the nose tightly

by grasping with the thumb and finger, and with the mouth closed attempt to blow through the nose. The effect will be to force air up into the ears, which will drive out into the canal, in cases of perforation of the drum membrane, any pus or mucus which may be present in the middle ear.

In case a physician who has made a special study of ear diseases can be consulted, it is of course safer to trust the patient in professional hands; but when this cannot be done, the above treatment may be safely and successfully undertaken.

**Open to Objections.**—On a certain occasion a child was brought to the droll Dr. Abernethy, who was suffering with a disease of the skin, but suffering still more from neglect of the bath.

"The Doctor, seeing at once that the latter misfortune was the cause of the former, said to the boy's mother, 'I can soon cure your son if you will strictly follow my directions. Get a large tub, fill it every day two-thirds full of warm water, put the little fellow into it, and then rub him all over with the best Castile soap and a coarse towel.' 'But, Doctor,' exclaimed the astonished woman, 'that would be giving the child a bath.' 'True,' replied the physician, 'it is open to that objection.'"

Nothing contributes more to the health of a child than the bath. The idea that the bath is necessarily weakening is an error which should be eradicated from the popular mind. The temperature of the bath should be a few degrees less than that of the body. It is invigorating, and encourages growth and development.

**Two Things to Teach Children.**—There are two things which, among many others, should be taught to every child, and which we mention specially because they are pretty certain to be neglected:—

1. Every child should be taught to breathe through its nose. The habit of mouth-breathing is frequently established by a succession of colds, which renders nasal respiration difficult or impossible. The continued habit of mouth-breathing is apt to produce diseases of the throat and larynx, a deformity of the chest known as pigeon breast, and even distortion of the face.

If it is impossible for the child to breathe through the nose freely, it should be taken to a physician for examination, and the cause ascertained.

The obstruction of the nose may be due to a

hypertrophy, or overgrowth of the walls of the nasal cavity, or the growth of different forms of polypus. When such obstructions are present, they should be removed by a surgeon, and such treatment should be employed as will prevent their re-formation.

2. Every child should be taught to spit whenever there is anything present in the nasal cavity which requires expectoration.

It is quite possible that the swallowing of catarrhal secretions from the nose and throat may communicate disease to the mucous membrane of the stomach.

**Hot Water in Diabetes.**—Few diseases are more obstinate and intractable than this. Often no remedy seems to afford any relief. In many cases, however, benefit may be derived from the use of hot water in liberal quantities. It should be taken in quantities of one to two pints—two to four glasses—three or four times a day. One to two hours before each meal, and on retiring at night, are the best times for using the remedy.

At the same time the diet should be restricted in a reasonable degree. Sweet and starchy foods must be avoided, though it is not necessary to rigidly exclude all starch from the diet, ary.

**Massage for Boils.**—A contributor to a medical contemporary asserts that he has cured boils while in their incipiency, during the last thirty years, by gently rubbing the red pimple which first appears, and claims that in a few moments the redness will disappear, and frequently the pimple itself and all trace of inflammation will be obliterated. Boils should never be allowed to "come to a head." As soon as there is evidence of the presence of pus, they should be opened with a sharp lancet.

**Blood-Poisoning by Retained Secretions.**—The *Philadelphia Medical Times* reports that the recent lamented death of Professor A. Wurtz, of Paris, was due to blood-poisoning following voluntary retention of urine for several hours during a somewhat prolonged railway journey, owing to the want of convenient opportunity for evacuation of the bladder.

Several times the *Sanitarian* has had occasion to animadvert upon the danger of the insufficient accommodations for the relief of nature in public school buildings; that the restraint thereby enforced upon children is a more common cause of illness than even medical practitioners are aware of, we think does not admit of question.

The case of Professor Wurtz is suggestive of the restraints common to travel and company, especially with regard to women, and closer inquiry into the causes of many obscure cases of peritonitis from unaccountable blood-poisoning would doubtless shed much light on this dangerously neglected subject.—*Sanitarian*.

**Prof. Loomis on Alcoholics.**—Dr. A. L. Loomis, one of the most distinguished practitioners of New York, recently remarked as follows regarding the use of alcoholic stimulants in an article in the *Weekly Medical Witness*:—

"A man may take two or three glasses of stimulants through the day as he may feel the inclination, and he may continue this habit for twenty years without any evident harm accruing from it; but when this man reaches that period of life when the vital powers are on the decline, he suddenly finds himself 'old before his time,' for he has all these years been laying the foundation of a chronic *endoarteritis*. I believe, gentlemen, that fifty per cent of all diseases arise from the use of alcoholic stimulants."

**Ring Worm.**—This troublesome skin disease is due to the development of a vegetable parasite. The following is a good remedy:—

Acid boracic, powdered,.....	dr. 1.
Water, .....	oz. 1.
M	

Apply to the diseased surface with a camel's-hair brush, and allow to dry.

**Cats and Scarlet Fever.**—Some time ago a writer in the *American Agriculturist* gave an account of the illness of a cat with scarlet fever, which it contracted from a member of the household who was sick with the disease. A number of instances are recorded in which this disease has been communicated to human beings by cats, and the same may be said of diphtheria. Look out for sick cats.

### Question Box.

**"Kennedy's Medical Discovery."**—A Western correspondent, who subscribes himself as "A Reader," says he has been advised to take "Kennedy's Medical Discovery" for eczema, and inquires our opinion of the remedy.

*Ans.*—We have never had any personal experience in the use of the nostrum named; but our experience in many cases of eczema convinces us that the disease is not curable by this

class of remedies. Nearly all sufferers with it have taken every regular and irregular remedy imaginable, without benefit.

If the individual will sponge the affected parts two or three times a day with salt and water, a teaspoonful to the pint, as hot as can be borne, continuing the treatment for ten to twenty minutes each time, we think he will, in the course of a month, derive more benefit than from all the patent medicines he could swallow.

The diet at the present time of the year should consist chiefly of fruits, grains, and milk.

**Nostrum for Rheumatism.**—M. J. J. inquires our opinion respecting the curative value of a much advertised nostrum which is warranted to cure rheumatism.

*Ans.*—We believe the remedy to be like most other advertised nostrums, a thorough humbug.

**Dietetics.**—Mrs. N. L. F. asks the following questions:—

1. Will good, ripe apples, eaten raw, create worms in children?
2. Are raisins hurtful if eaten raw?
3. Which is the most harmless to eat with bread, molasses or butter?
4. What would you advise for children to eat with their bread, as a general rule?
5. Would graham, eaten raw and dry, prove injurious to a person who has no appetite for other kinds of food, and can relish that?

*Ans.*—1. No.

2. Raisins are somewhat difficult to digest, especially when eaten raw. Still most persons are able to digest them if properly masticated.

3. A little butter eaten with bread is decidedly preferable to a large quantity of molasses. A small quantity of molasses might perhaps be preferable to the usual amount of butter eaten with bread.

4. Children should be taught to use fruit, or fruit sauces of various kinds, with bread.

5. Raw starch, one of the essential constituents of graham flour, is not easy of digestion, although it is possible for it to be digested by the pancreatic fluid. We should not recommend the use of raw wheat or wheat flour, but are not certain that any serious harm would come from using it for a limited time; and there have been cases in which persons have been considerably benefited by using it in this manner.

**Comedones.**—H. B., of Illinois, inquires:—

1. What is the cause of grubs, or worms, on the face?
2. What will prevent their coming after they have been pressed out?

*Ans.*—The cause of the so-called grubs, or comedones, is an excessive secretion of fatty matter in the follicles and sebaceous obstruction of the ducts, through which it usually finds its way to the surface. The fat hardens, and when

pressed out, has very much the form of a small grub. The disease is often associated with dyspepsia, and not infrequently with acne of the face. The follicles should be kept carefully emptied of their contents, and the face should be bathed thoroughly two or three times a day, with hot water. A mild astringent lotion, as one dram of sulphate of zinc, or tannic acid, to the pint of distilled water, may be used with benefit in many cases. We have employed painting the nose with collodion, and have been pleased with the results, but wish to give the remedy further trial before we venture to recommend it.

**Caramel Coffee.**—L. B. P. inquires how to make caramel coffee.

*Ans.*—This preparation, sometimes known as cereal coffee, is made by roasting in the oven a mixture of molasses and bran, or coarse middlings. Cereal coffee properly consists of coarse wheat or barley, or a mixture of the two. The brown color is due to the conversion of starch or sugar into caramel. It is comparatively harmless, but we do not approve of the large use of fluids of any kind at meals.

**Late Suppers—Hiccough—Fever-Sore.**—Mrs. E. E. S. inquires as follows:—

1. It has been argued in favor of late hearty suppers, that babies and the lower animals fill themselves, and lie down to sleep. Why should we not imitate their example, as their habits and appetites are supposed to be unperverted?
2. What makes babies hiccough? and how may it be prevented?
3. What causes a fever-sore, and is it well to heal it up?

*Ans.*—1. See January number, page 19.

2. Hiccough is usually produced from indigestion. It usually arises from an accumulation of gas in the stomach, causing strong pressure upon the sides of the chest. Drinking hot water, or a little peppermint water, will often give relief. Fomentations over the stomach, and gentle kneading of the stomach, are also useful for the same purpose.

3. The so-called fever-sore is a chronic ulcer, which is not infrequently the result of a varicose condition of the veins of the lower extremities, on which the ulcer usually occurs, the favorite location being the vicinity of the shin, where the tissue is thin, and the vitality less than in more fleshy parts of the body. The sore should be healed up.

**Cold Feet.**—A. C. B., aged sixty-five, suffers much with cold feet, and desires to know the cause, and how the difficulty may be remedied.

*Ans.*—As the individual's habits of life seem to be reasonably healthful, it is probable that the difficulty is simply the result of the weakening of the circulatory forces due to advancing age. The alternate hot and cold bath and vigorous rubbing of the limbs with oil, morning and night, together with the wearing of extra

warm covering for the feet and limbs, are the best remedial measures which we are able to recommend.

**Baking Powder—Sulphur—Dried Peaches—Gluten Flour—Swallowing of Coin—Granola.**—H. J. A. inquires as follows:—

1. Best baking-power is said to be composed of bitartrate potass., tartartic acid, carb. ammonia, and soda bicarb., bound together with a little starch. Can you give me the proportion to use?

2. Does smoking fruit with sulphur fumes render it unwholesome?

3. Are unpeeled dried peaches less wholesome than the peeled?

4. Who manufactures "gluten flour," and what are its merits compared with good patent or graham flour?

5. What should be a fair price for gluten flour?

6. Is it dangerous for a child to swallow the coin known as "a nickle," and what would be the proper treatment?

7. What is granola, of what is it made, how prepared for the table, and what are its merits?

*Ans.*—1. We cannot recommend baking-powders of any description. They are totally unnecessary, and should never be employed in cooking. We might give our correspondent the formula desired; but in doing so, we should run the risk of being considered as indorsing their use, which we cannot do.

2. Sulphur has for ages been used as a preservative agent; but it certainly deteriorates fruit or any other food which is exposed to the fumes arising from it when burned.

3. Yes.

4. Gluten flour can be obtained from the Sanitarium Food Company, at Battle Creek, Mich. It contains a very much larger proportion of gluten than either patent or graham flour. This flour, however, must not be confounded with pure gluten, as it is fully three-fourths starch.

5. The prices at which gluten flour can be afforded depend wholly upon the degree of purity. It is sold at all prices from five to fifty cents per pound. That sold at the lower price cannot be expected to be much superior to the whole-wheat flour, or the very best grades of patent flour made from spring wheat.

6. Children do not often die from swallowing coins, and there is little to be done but wait for nature to eject the intruder in her own way.

7. A full description of granola will be found in a little pamphlet published and sent gratis to those who desire, by the Sanitarium Food Co., Battle Creek, Mich.

**Intestinal Dyspepsia.**—A reader who is suffering with the usual symptoms of intestinal dys-

pepsia, with some evidence of slow stomach digestion, also desires a prescription.

*Ans.*—Every morning, immediately on rising, which should be an hour before breakfast, drink two or three glasses of water as hot as can be swallowed without inconvenience. One and one-half hours before dinner, swallow the same quantity of hot water. One-half hour before retiring at night, drink two or three glasses more of hot water. Take two meals a day. Eat rather dry food, taking no fluids at meals unless it be a small quantity of hot milk. The milk should not be scalded, only heated as hot as can be sipped comfortably.

The diet should consist chiefly of fruits, without sugar, and coarse grain preparations. Vegetables should be avoided, also butter, and condiments of all kinds. A small quantity of sweet cream may be substituted for butter. No other fluids should be taken during the day, except hot water as recommended.

On retiring at night, wet a towel in cold water, wring dry enough so it will not drip, wrap around the body, and cover with three or four thicknesses of dry flannel, to prevent chilling.

On rising in the morning, remove the bandage, and rub the body vigorously with the hand dipped in cold water. Rub again thoroughly with a coarse towel, and then apply a little olive-oil over the surface, and cover with one or two thicknesses of flannel, to be worn during the day.

Repeat this daily for a month. Regular times should be appointed for relieving the bowels daily.

In addition to the measures named, kneading and percussing the bowels ten or fifteen minutes at a time, two or three times a day, is a useful measure. The patient should take abundant exercise in the open air, and should employ every means for building up the general health.

**Vegetable and Fruit Skins—Decayed Apples.**—J. D. C. inquires:—

1. Are the skins of cooked vegetables and uncooked fruits improper food for a healthy stomach?

2. When an apple is partly decayed, is the remaining portion affected so as to render it unhealthful?

*Ans.*—1. We do not think an ordinary healthy stomach would be particularly harmed by the small quantity of fruit or vegetable skins likely to be taken with the food, although a large quantity of these indigestible materials might form an obstruction in some part of the alimentary canal.

2. The juice circulates in the apple very much as the blood circulates in the tissues of an animal, though of course not quite so rapidly or freely. The circulation is sufficient, however, to convey to all parts of an apple the odor and flavor of decomposition, when only a small portion has undergone decay. It is not possible to say that serious disease will arise from the use of such fruit; but certainly it cannot be regarded as first-class food.

## SCIENCE IN THE HOUSEHOLD.

CONDUCTED BY MRS. E. E. KELLOGG.

## TURNIPS.

*Composition of White Turnip.*—

Nitrogenous matter, .....	0.5
Pectose, .....	4.0
Fat, .....	0.1
Mineral matter, .....	0.8
Cellulose and lignose, .....	1.8
Water, .....	92.8

Total, 100

Total nutritive value 7.2 parts in 100.

*History.*—The turnip belongs to the order *Crucifera*, or Cross flowers, so called because of their four petals being arranged in the form of a cross. It is a native of Europe and the temperate portions of Asia, growing wild in borders of fields and waste places. The ancient Roman gastronomist considered the turnip, when prepared in the following manner, a dish fit for epicures. After boiling, the water was extracted from them, and they were seasoned with cummin, rue, or benzoin, pounded in a mortar; afterward, honey, vinegar, gravy, and boiled grapes were added. The whole was allowed to simmer, and served.

*Structure and Digestibility.*—When under cultivation, the turnip forms an agreeable culinary esculent; but on account of the large proportion of water entering into its composition, its nutritive value is exceedingly low. The Swedish, or Rutabaga, variety is rather more nutritive than the white; but its stronger flavor renders it less palatable. Unlike the potato, the turnip contains no starch, but instead a gelatinous substance called pectose, which during the boiling process is changed into a vegetable jelly called pectine. The white lining just inside the skin of the turnip is usually bitter, and hence the tuber should be peeled sufficiently deep to remove it. When well cooked, turnips are quite easily digested.

*General Rules for Preparation and Cooking.*—Turnips are good for culinary purposes only from the time of their ripening till they begin to sprout. The process of germination changes their proximate elements, and renders them less fit for food. In selecting turnips, they should be plump, with fresh, unshriveled, skins, and free from disease. A turnip that is wilted or that, when cut, appears spongy, pithy, or cork-like, is not fit for food.

Prepare turnips for cooking by thoroughly washing and scraping if young and tender, or by paring if more mature. If small, they may be cooked whole; if large, they should be cut across the grain into slices a half-inch in thick-

ness. If cooked whole, care must be taken to select those of uniform size; and if sliced, the slices must be of equal thickness.

Turnips, like all other vegetables, should be boiled in as small an amount of water as possible, leaving very little to drain off when done. Great care must be taken, however, that the kettle does not get dry, as scorched turnip is spoiled. An excellent precaution to take in order to keep them from scorching in case the water becomes low, is to place an inverted saucer or sauce-dish in the bottom of the kettle before putting in the turnips. Put them into boiling water, cook rapidly until sufficiently tender to pierce easily with a fork or skewer, but not longer; too much cooking discolors and renders them strong in flavor. Boiled turnips should be drained *very* thoroughly, and all water pressed out before preparing for the table.

*Time.*—The age, size, and variety of the turnip will greatly vary the time necessary for its cooking. The safest rule is to allow plenty of time, and test with a fork. Young turnips will cook in about forty-five minutes. Old turnips, sliced, require from one and a quarter to two hours. If cut in halves or whole, they require a proportionate length of time. White turnips require much less cooking than yellow.

## RECIPES FOR COOKING TURNIPS.

**Baked Turnip.**—Select turnips of uniform size, wash but do not pare, wipe with a dry cloth, and place on the top grate of a moderately hot oven. Bake two or more hours, or until perfectly tender, peel, and serve at once, either mashed or with cream sauce. Turnips are much sweeter baked than cooked in any other way, but they require a longer time.

**Baked Turnip.**—Pare, but do not cut, some sweet *young* white turnips, boil till tender in a small quantity of water. Drain and dry well. Cook a tablespoonful of flour in a pint of rich milk or part cream, arrange the turnips in a baking dish, pour the sauce over them, sprinkle with grated bread crumbs, add salt if desired, and brown in a quick oven.

**Mashed Turnip.**—Wash, pare, and drop into boiling water. Cook until perfectly tender, turn into a colander, and press out the water with a plate or large spoon. Mash until entirely free from lumps, season with a little sweet cream, and salt if desired. If the turnips are especially watery, one or two hot mealy potatoes mashed with them will be an improvement.

**Steamed Turnip.**—Turnips are excellent if cooked in a closed steamer over boiling water. Prepare as for boiling, and steam rapidly till they can be easily pierced with a fork. They may be served with lemon juice, cream sauce, or mashed, as desired.

**Scalloped Turnip.**—Prepare and boil whole turnips until nearly tender, cut into thin slices, lay in an earthen pudding dish. Pour over them a white sauce made by cooking a table-spoonful of flour in a pint of new milk, part cream if preferred, until thickened. Have sufficient sauce to just cover the turnip, season with salt if desired, sprinkle the top lightly with grated bread crumbs, and bake in a quick oven until of a rich brown. Place the baking dish in a clean plate, and serve them. Rich milk may be used instead of the white sauce if preferred.

**Chopped Turnip.**—Chop tender-boiled, well drained turnip very fine, add salt to taste and a few spoonfuls of lemon juice, just sufficient to moisten all the turnip. Turn into a sauce-pan, and heat till hot, gently lifting and stirring constantly, that all portions may be heated alike. Cold boiled turnip may be used advantageously in this way.

**Stewed Turnip.**—Prepare and slice some young, fresh white turnips, boil or steam about twenty minutes, drain thoroughly, turn into a sauce-pan with a cupful of new milk for each pint of turnips. Simmer gently until tender, season with salt if desired, and serve.

**Turnips with Cream Sauce.**—Wash and pare the turnips, cut them into half-inch dice, and cook in boiling water until tender. Meantime prepare a cream sauce by heating a pint of thin cream to boiling, and stirring into it a table-spoonful of flour well braided with a little cold milk. Boil two or three minutes, and add salt if desired. Drain the turnips from the boiling water, turn the cream sauce over them, let them boil up once, and serve.

**Turnips in Juice.**—Wash clean, peel, and boil whole some young white turnips. Use only just sufficient water to keep them from burning. Cover closely and cook gently until tender, by which time the water in the kettle should be reduced to the consistency of syrup. Remove as soon as done, and serve at once.

#### FRUIT RIPENING AND DECAY.

AFTER a fruit has attained its full size, and received from the tree all the nutriment that can conduce to its perfection, it is fully mature, and then makes preparation for dropping. This is especially seen in the pear, in which the hold upon the tree, so to speak, is lessened; and if the fruit be gently raised to a horizontal position, the stem parts from the tree by a clean fracture. In the peach and some other fruits, decay soon follows maturity; while in the russet apple it does not occur until at the end of several months. Among apples and pears we find a great difference in the rapidity with which decay takes place. In some it occurs in a few days after maturity, and it is useless to try to keep these.

They are called early varieties, and must be disposed of as soon as possible after they are mature. The late varieties of apples and pears afford no exception to the statement that fruits commence to decay soon after they are mature. This decay is very slow, but not the less certain. In keeping such fruits, we endeavor to retard or prolong the process as much as possible. There is a certain point in the process of decay at which these fruits are best suited for use. We call it ripeness or mellowness, and say that the fruit is in "eating condition." When fruit reaches this condition, destructive decay or rotting soon follows.

After late apples are stored for the winter, the gradual decay, of which we have spoken, commences. Important changes are going on within the fruit. It absorbs oxygen from the air of the room, and gives off carbonic acid gas. Another change results in the formation of water, which is given off as moisture. The taking up of oxygen by the fruit, and the giving off of carbonic acid, in a short time so vitiate the atmosphere of the room in which the fruit is kept, that it will at once extinguish a candle, and destroy animal life. An atmosphere of this kind tends to preserve the fruit. There being little or no oxygen left in the air of the room, the process of decay is arrested. Hence it is desirable that the room be air-tight, in order to maintain such an atmosphere.

The production of carbonic acid shows that the cellar in a dwelling is an improper place for storing fruit. When the gas is present in the air in sufficient proportion, it causes death, and a very small quantity will cause headache, listlessness, and other unpleasant effects. No doubt that many of the troubles attributed to malaria, are due to the gases from vegetables and fruits stored in the cellar. A fruit cellar should be underneath some other building than the dwelling, or a fruit house may be built entirely above the ground. A house to keep fruit properly must be built upon the principle of a refrigerator. Its walls, floor, and ceiling should be double, and the space between them filled with sawdust. The doors and windows should be double, and, as light is undesirable, the windows are to be provided with shutters. There should be a small stove for use, if needed, to keep a proper temperature in severe weather.—*American Agriculturist.*

**Household Dirt.**—A writer in the *London Times* calls attention to a much neglected subject in the following paragraph:—

"The dirt of an ordinary house, the dirt which may be wiped from the walls, swept off the furniture, and beaten out of the carpets, would be sufficient, if it were powdered in the form of dust over the patients in the surgical wards of a great hospital, to bring all their wounds into a condition which would jeopardize life. It cannot be supposed that such dirt is innocuous when it is breathed or swallowed, and it certainly possesses the property of retaining for long periods the contagious matter

given off by various diseases. Instances without number are on record in which the poison of scarlet fever, long dormant in a dirty house, has been roused into activity by some probably imperfect or bad attempts at cleansing."

**Honey** is an article collected by the bee for its own use, which man takes possession of and consumes instead. It is an exudation from the nectariferous glands of flowers, which the bee sucks up and passes into the dilatation of the œsophagus forming the crop or honey-bag. From this it is afterwards disgorged, probably somewhat altered in its properties by the secretion of the crop, and deposited in the cell of the honeycomb. In Europe, it is principally through the *Apis mellifica* that honey is obtained, and it is by the neuter or working member of the hive that the office is performed. The honey of Surinam and Cayenne, furnished by the *Apis amalthea*, is red, and that supplied by the *Apis unicolor* of Madagascar is of a greenish color.

Honey is a concentrated solution of sugar, mixed with odorous, coloring, gummy, and waxy matters. It usually resolves itself into a fluid and a solid crystalline portion, which are separable from each other by pressure in a linen bag. Chemically, the saccharine matter is of two kinds: the one resembles that from the grape (glucose), while the other is uncrystallizable, and analogous to the uncrystallizable sugar which exists along with common sugar in cane-juice. Mannite, a non-fermenting kind of sugar, has also been met with.

Honey varies in flavor and odor according to the age of the bees, and the flowers from which it has been collected.

*Virgin* honey, or that procured from young bees that have never swarmed, is held in higher estimation than that collected from a hive that has swarmed; but the term virgin honey is also applied to that which flows spontaneously from the comb, on account of its being better than that obtained by the aid of pressure, and especially heat and pressure, this being contaminated with foreign matter derived from the comb. The honey, again, of certain countries and districts is well known to possess special qualities dependent on the flora of the locality. Hence, the fragrant odor and choice taste belonging to the honey of Mount Ida, in Crete; the neighborhood of Narbonne, where the labiate flowers abound; the valley of Chamounix; and of our own high moorland, when the heather is in bloom. Hence, also, the deleterious qualities which the honey of Trebizonde, upon the Black Sea, has long been known to possess, and which are due to its collection from a species of rhododendron, the *Azalea pontica*, which grows upon the neighboring mountains. The effects produced consist of headache, vomiting, and a kind of intoxication; and if eaten in large quantities, a loss of all sense and power for some hours may occur. It is said to have been probably this kind of honey which poisoned the soldiers of Xenophon, as described by him in the "Retreat of the Ten Thousand."—*Pavy on Food and Dietetics*.

## Literary Notices.

ANNUAL OF SURGERY: J. Chambers & Co., St. Louis.

We have just received the first number of the *Annual of Surgery*, a new monthly review of surgical science and practice. The journal is published simultaneously in this country and in Europe, and if the first number is a sample of what its successes are to be, it will certainly prove highly interesting, and a very valuable acquisition to American literature. It is of course devoted strictly to subjects of interest only to practical surgeons. Price \$5.00 a year in advance.

STORIES FOR HOME FOLKS, YOUNG AND OLD; John B. Alden, 393 Pearl St., N. Y.

This is the attractive title of a pretty volume just published. It starts out with "A True Story of President Lincoln," which, with other war reminiscences that follow, will waken a patriotic glow in the hearts of readers, both old and young. There are stories of travel in this and other lands, stories of famous people, of "My First Love-Letter," "Almost a Ghost Story,"—in all twenty-nine stories, which, being written by that famous author, Grace Greenwood, who is well known as one of the most graceful and captivating writers, will find joyful listeners everywhere. The volume is equivalent in size and appearance to the author's other works heretofore sold at \$1.25; but being published by the "Literary Revolution,"—John B. Alden,—it is sold for 50 cents.

*The Woman's Magazine*, established in 1877 as *Woman at Work*, changed its title to *The Woman's Century* in September,—a name very significant of the character of the magazine as a reflex of woman's best work. The Century Co. of New York have secured a "Trade-mark," which they claim gives them exclusive use of the word "Century" as applied to printed publications; and rather than resort to the courts to establish the use of the word, the proprietor modifies the title to *The Woman's Magazine*, using Victor Hugo's saying, "The Nineteenth Century is Woman's Century," as a motto. It has established a reputation for a high degree of excellence and practical worth, and begins the New Year with such names as Kate Sanborn, "Jennie June," and Lilian Whiting among the contributors. \$1.00 a year, 10 cents a copy. Frank E. Housh, Publisher, Brattleboro, Vt.

*The Dorcas Magazine*, a periodical devoted to the interests of women and the home, has completed its first year's work. Its pages are filled with plain directions for making an infinite variety of useful and decorative articles, and its aim is evidently not only to help women to employ their time in a useful and pleasing manner, but also to be of service to those whom necessity compels to labor.

Address, *Dorcas Magazine*, 872 Broadway, N. Y. City.

## Publisher's Page.

Those who desire to canvass for GOOD HEALTH will receive an outfit free by addressing the publishers. A good commission given those who will devote themselves to the work.

In consequence of not receiving the new paper ordered for the present number in time, we are obliged to use for a portion of the edition this month, the same paper used last year, which is thinner, and consequently gives to the present number a somewhat leaner appearance than would otherwise be the case.

This number is a little behind the time we had set for each issuing of the journal during the present year, on account of the delay in receiving the paper from the manufacturers, though our order was sent in ample time to have the paper in readiness.

We wish to call the especial attention of our readers to the advertisements in this journal, all of which we can warrant to be worth careful perusal, and deserving of an investment if they represent anything in the line of the reader's wants. We do not allow anything to be in our columns which we cannot fully indorse.

Eleanor Kirk's interesting serial, "A Troubler in Israel," of which the second installment appears in the present number, will continue through the greater portion of the year. The manuscript is all on hand, and each number grows more interesting, and presents numerous questions relating to health culture in a most impressive and practical light.

The Office of GOOD HEALTH is doing the liveliest business on record. Outfits for canvassing have been sent out to several hundred agents, who are by this time hard at work soliciting subscriptions, and presenting the journal to the public.

Mrs. E. E. Kellogg will begin with the next number a series of sketches of travel in the South. She is now spending a few weeks with friends at Tampa, Florida, and reports weather fine, green peas, strawberries, bananas, pine-apples, and oranges in abundance.

The next number will contain a valuable and practical article entitled, "Temperance in the Kitchen," from the well-known pen of Miss Julia Colman.

Our old friend, Dr. J. H. Lovell, with his wife, Mrs. H. W. Lovell, M. D., has located in Philadelphia, where they expect to engage in medical practice. They also have accommodations for a few hygienic boarders, and will keep for sale an assortment of works on hygiene. We shall be glad to hear of their success. Their residence is 643 North 8th St., Philadelphia, Pa.

**Something Elegant.**—The publishers of GOOD HEALTH have this year issued an elegant monthly calendar, the beauty and utility of which entitle it to a place in every home, office, counting-room, or other place where calendars are needed. It is gotten up in excellent taste, and contains besides the calendar matter, useful health hints for each month in the year, and a good assortment of wholesome and healthful wit.

Sent securely wrapped, post paid, on receipt of ten cents.

**A New Year's Gift to Every Subscriber.**—Every subscriber who will send in his subscription for 1885 before March first, inclosing two two-cent postage stamps to cover cost of postage, mailing, etc., will receive a beautifully-printed monthly calendar. Subscriptions may be paid in advance if not now due, and those who have already renewed for 1885 may receive the calendar by sending the postage stamps as stated.

The following are a few samples of commendatory letters which we receive monthly from new and old subscribers:—

Mrs. R. M. L. M., of Pa., writes: "I received my first number of GOOD HEALTH last week, and am very much pleased with it. I see that many changes and improvements have been made since I last took it, several years ago, and I must say it is once more a welcome guest in our home, and I hope I will not again neglect renewing my subscription."

O. R. N., of Ill., a veteran reformer whose life motto has been, "Temperance in all things," has received the January number, and is much pleased with it. Notwithstanding his advanced age, he is going to undertake to obtain a few subscribers.

J. C. M., of Ky., says: "In reply to yours of recent date, I must say that I cannot afford to do without your very valuable journal, GOOD HEALTH. I have been a reader of it for quite a number of years, and would not do without it if the subscription price were four times what it is. Will try to obtain some subscribers for it soon."

F. J. H., of Ga., writes: "I am glad to see the journal continue to improve. I like it very much, and could say many good things about it, but compliments won't pay subscriptions, as you know. If I could devote more time to it, I would be glad to have the agency for the journal, but my duties in the office of Ass't Gen'l Passenger Agent, require most of my time. However, if you will send me some circulars, and an extra copy or so, I will see what I can do at odd times."

If F. J. H. will give us a few of his odd moments, we feel confident that he will be able to secure us quite a number of subscriptions in the next few weeks, and how many are there among our numerous subscribers who cannot do the same? One odd hour each week, for the next six weeks, spent by each subscriber to GOOD HEALTH, would add many thousands to our lists.

Mrs. J. W. C., of Mo., writes: "Inclosed find stamps for the New Year's gift to subscribers. We are life subscribers to GOOD HEALTH. Such an excellent work we cannot do without."

A. E. C., of Wis., in renewing his subscription, sends a number of names, also, and is going to try to get more subscribers, feeling, as he says, "That the journal ought to be in every family."

Mrs. E. D., of Baltimore, for many years a subscriber, still says: "I would not be without your valuable journal." Mrs. D. has always been greatly interested in the mission of the journal, and has been an indefatigable worker in bringing it to the attention of her friends.

F. A. L., of La., in renewing his subscription, remarks: "Your journal, GOOD HEALTH, I appreciate greatly, and can see that rapid progress has been made scientifically in your institution, as well as your journal, as I have been acquainted with both since first founded. I do not care to offer any particular advice, but hope to see the time when you will diagnose certain diseases, and prescribe treatment for the same; and also prescribe treatment for certain accidents, such as fractures, dislocations, and sprains. These are points that the masses are in ignorance of, and the time should come when physiology and hygiene, materia medica and therapeutics should be made as common a study in every district and public school as arithmetic and grammar."

GOOD HEALTH is particularly devoted to the promulgation of the principles of preventive medicine. Frequently, however, in our Domestic Medicine department, we give hints relative to the simple management of common diseases. Possibly our subscriber has not noted the new departure which we have been introducing in this department, and which we expect to continue during the year to come.

T. J. H., of Mass., renews his subscription, and says: "There is at present in circulation, a petition to the Massachusetts Legislature, to enact a law requiring the teaching and study of physiology and hygiene in all public schools and institutions of learning supported by taxation. I think, should it become a law, your magazine, GOOD HEALTH, would be a very valuable work for school-teachers to have. Let us hope that it may become a law."

Mrs. M. J. C., of Ohio, sends \$1.00 for her subscription to GOOD HEALTH for the year 1885, and says: "Please let my subscription commence with the January number, for we do not want to do without a single copy."