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THE CHIEF CAUSE OF WINTER DISEASES.

BY J. H. KELLOGG, M. D.

ALMOST all winter maladies and respiratory disorders may be attributed primarily to taking cold. Consumption, pneumonia, bronchitis, pleurisy, often begin in this way. A child has the croup — it was a cold that started it. Diphtheria never comes without it. The throat must be congested or sore from a cold, a continued irritation so that the cells have lost the power to defend themselves, before diphtheria can obtain a foothold. The winter cough is simply a bronchial catarrh that is awakened by the first cold. If one were able to meet cold weather without taking cold, there would be no cough.

A cold, then, is a matter of very great significance. If we can protect ourselves from taking cold, we shall usually be able to escape the disorders common in winter.

Colds, however, are not ordinarily looked upon as serious. Many people say that they are "just as well as usual" only they "have a little cold;" they will be "all over it in a few days." But the chances are that they will never be all over it. One cold leaves a susceptibility to others, a tendency to disease that it is almost impossible to get rid of.

The perfectly healthy person, the man who is in prime condition, never takes cold. Did you ever hear of Corbett or Fitzsimmons taking cold just before he went into a fight? When a man is in the "pink" of condition to go into a pugilistic or any other encounter, there is not the slightest danger of this misfortune. Hence the first thing to do to protect one's self is to become well and healthy, to get the skin into a perfectly healthy condition. Then it will be able to take care of itself, and to act as a defense against disease.

There is a variety of ways in which a cold may be brought on. A little knife-blade of air blowing in through a crack in a window, upon some part of the body, will chill that part, and the blood-vessels of that region will become contracted, affecting, somewhere in the interior of the body, an area in reflex relation with this portion of the surface of the body. For instance, the blood-vessels of the skin of the top of the shoulders and the chest are associated with the blood-vessels of the lungs, so that whatever happens to the blood-vessels of the skin of the shoulders and chest happens also to the blood-vessels of the lungs. If there is a contraction of the blood-vessels of the back of the neck, there will be a contraction of the blood-vessels of the nose and throat, and if there is a contraction of the blood-vessels of the top of the shoulders and the shoulder-blades, there will also be a contraction of the blood-vessels of the lungs.

When the influence of the cold is continued, this contraction is followed by congestion. When one puts his hands into cold water for a few minutes, they are first pale, and then red. This is re-

action. The longer the application and the more intense the degree of cold, the greater will be the contraction and the congestion. So if the back of the neck is exposed for a long time to the influence of cold, one is likely to have a cold in the nose and throat; if the shoulder-blades and the tops of the shoulders are exposed, one is likely to take cold in the lungs, and suffer from congestion of the lungs. If the cold is long continued, it may cause not only a congestion but an inflammation of the nose or the lungs. So, if the bottoms of the feet become wet or chilled, a weakness of the bladder may result if there has ever been a trouble there; or a weakness of the stomach, if there has been a catarrh of that organ.

In order, then, to avoid the diseases of winter, and to secure for one's self a constant protection against changes in the weather, it is necessary to cultivate a healthy skin. One must keep himself physically strong by obeying the laws of health. When people die of pneumonia in winter, it is because their lungs have lost the power to resist disease; their general vital resistance is gone; their lungs become congested from a little exposure because the skin is inactive, germs find a foothold and develop in the lungs, the lungs fill up with exudate, and they no longer have lung capacity enough to keep them breathing.

Pneumonia and all these winter diseases may best be avoided by maintaining perfect activity of the skin. The man accustomed to taking a cold bath every day of his life need not fear pneumonia. The child who has a daily cold bath will not be susceptible to tonsillitis, diphtheria, croup, or capillary bronchitis, for he is protected by this gymnastics of the skin from those maladies which come from internal congestions.

One of the most important precautions to observe in winter is not to overclothe the body. The clothing should not be so heavy as to cause the skin to perspire. Many people smother themselves with woolen clothing. The writer has become convinced that it is not best to wear woolen clothing next to the body. It is only people so extremely feeble that they ought to be kept in an incubator in order to be safe from the hardships of cold, who need to wear woolen next to the skin.

The peculiarity of wool is that it absorbs a large quantity of water before it appears to be wet. Wool is highly hydroscopic, as the physicists would call it; on the other hand, linen becomes wet and shows it as soon as water comes in contact with it. A woolen cloth or garment, upon being dipped quickly into a pail of water and removed, will not appear to be even moistened, whereas a linen garment will be wet through instantly. Linen has not the hydroscopic property of woolen. The latter is also irritating to the skin, while linen is not.

The practical difference in wearing these fabrics is this: Linen next the skin takes up moisture quickly, passes it on quickly, and it is gone. But a woolen garment takes up perspiration slowly, and passes it on slowly, the consequence being that there is always a large quantity of moisture next the skin; the skin itself is saturated with moisture, and heat is given off with great facility. This is a very important point. Dr. Hurtz, an eminent scientist of Vienna, has made extensive experiments with reference to the rate at which the skin gives off heat, and he finds that it does so almost twice as rapidly when moist as when dry, the reason for this being that the heat must be conducted to the surface before it can be given up. A dry skin is a poor conductor, but a moist skin is a good one. Heat is readily given off by both conduction and radiation when the skin is moist. Moisten the finger and pass it through the

THE BIRTH OF JESUS (LE ROLLE).

air; the finger cools quickly. By this means one can tell in which direction the wind is blowing. Wet the entire finger, and hold it up in the air; the wind causes evaporation to take place, and this cools that side of the finger. So it is with the whole body. When the entire surface is moist or damp, the heat is being thrown off with great rapidity, and one is likely to be chilled. With woolen underwear the moisture of the skin is retained for a long time, and since the heat is being constantly and rapidly brought to the surface and thrown off in this way, the surface of the skin becomes chilled, and the person is far more likely to take cold than if he wore linen, for the linen takes up the moisture and transmits it to the outer air, drying at once. Therefore I am becoming more and more satisfied that linen clothing is better suited for every season of the year and for all persons, with the exception of those who are very feeble. This is not a new idea, for Priessnitz, that remarkable genius who proposed the use of cold water in the early days, also made this discovery with reference to the clothing.

Nature requires us all to pay a tax for wearing clothes, and this tax we have to work out in cold baths every morning in order to make our skins healthy and vigorous,—to give them the same quality which the Indian's skin has; we must antagonize the enervating influence of dress by the habit of daily cold bathing.

It is of particular importance to avoid overclothing the neck, for it is in the throat and lungs that colds are most frequently contracted, because these parts of the body are more abused than any other. On going out of doors it is very common to wrap a thick woolen or fur muffler about the neck, thus producing perspiration; when one comes indoors and takes off this muffler, the neck is cooled, a chill follows, the blood is congested, and inflammation results, causing nasal or pharyngeal catarrh.

Another frequent cause of colds is the wearing of rubbers, which, being impervious to moisture, retain perspiration, so that the feet are soon moist. When the rubbers are removed, the evaporation through the leather of the shoe and the cooling-off process give the feet a chill, and one takes cold just as surely as if he had gone out of doors without his rubbers and wet his feet. In this case the thing to be done to avoid a cold is to take off the shoes and stockings, and put on fresh, dry ones.

One of the most common and unsuspected ways of taking cold is the habit of wearing rubber waterproofs, or mackintoshes; these, being put on over the clothing, retain all the moisture excreted from the body and prevent its evaporation; when the waterproof is removed, this moisture evaporates very rapidly, and one is chilled even in his own home, where he feels perfectly safe.

Too much bed clothing is a great cause of taking cold during the night, and furthermore, leaves a susceptibility to taking cold during the day. A heap of blankets on the bed, almost smothering one, is a great mistake, for the bed absorbs the moisture thrown off by the body. Now, if one throws off but an ounce of water in an hour, in eight hours he has thrown off half a pound, and this has been absorbed by the bedding. Suppose that the bed is in a cold room, and the water has not evaporated; the bed clothing does not dry, and at night the bedclothes feel a little damp. Day after day more and more moisture collects in the bed, until, after a few weeks of cold weather, there may be several pounds of water in the bed. The spare bed in a cold bedroom is always damp, for the house is a distillery; in the kitchen the kettles are boiling, in the laundry the

clothes are boiling, and the steam keeps diffusing through the house until it finds some part that is cold, and there it condenses. This moisture finds its way to the spare bedroom where there is no fire, to the parlors and the reception room, if they are not heated every day, and there it accumulates. When spring comes, these rooms begin to have a musty smell, and mold can be seen upon the walls.

It is evident that a person going to sleep in such a room is in danger of being chilled, because he has not only to warm the bed, but he must also dry it out by the warmth of his body, and that operation takes a great deal of warmth away from his person, so that he awakes in the morning tired out and exhausted, for it has taken all his energy and heat to warm up that bed. There is death in the spare bed. One might almost as well stand up before a bullet as to sleep in a damp spare bed. Many a person has taken his death-cold, contracted pleurisy, rheumatism, sciatica, or some other distressing ailment, by just one night spent in such a bed.

Another necessary precaution against colds in particular and disease in general is to live in a cool atmosphere, out of doors as far as possible. We must not only bathe in cold water and accustom ourselves to light clothing both in the daytime and at night, but we must accustom ourselves to cold air. If we could train ourselves to living in rooms at a temperature of 60°, we should not be threatened with colds; but most people have the temperature of their houses nearer 90° in winter. If these same people happen to be out in the open air in the summer when the thermometer is standing at 90°, they exclaim, "How terribly hot!"

The winter season ought to be the most healthful time of the year. In the summer we can not control the weather, but in the winter we can, to a degree, indoors at any rate. The best temperature is from 60° to 70°. Sixty-five degrees is about the maximum. Children have rosy cheeks when the thermometer stands at 65°, but when the temperature rises above 70°, they become languid. In England the temperature of living-rooms is never allowed to rise above 70°. About sixteen years ago in a hospital for consumptives there, I found that the temperature was maintained at from 52° to 60°. It was never allowed to rise above 60°, and was more often at 52°. In this country we should call that altogether too low.

These winter diseases are not so formidable if properly managed. The rational principle which underlies all treatment is to keep the skin active,— not so active as to induce perspiration and bring on a chill, but normally active and able spontaneously to resist the inevitable exposure of cold weather.

THE EDELWEISS.

FAR up on sternest Alpine crests,
Where winds of tempest blow,
They say that, all unfearing, rests
A flower upon the snow,—
A tiny flower, pale and sweet,
That blooms o'er breath of ice;
And glad are they, on any day,
Who find the edelweiss.

Ah! far on heights of sorrow cold,
Where tears are dropping slow,
Some hearts have found, and, finding, told
How fair a flower may grow.
With petals pale, but perfume rare,
It garlands days of ice;
And blessed are they who, weeping, pray,
And find faith's edelweiss.

— *Margaret E. Sangster.*

HOLIDAY CUSTOMS IN FRANCE.

BY MARY HENRY ROSSITER.

THE French Christmas is almost wholly a religious fête, and the manner of its observance is tinged with Catholicism. It is tinged also with indifference and worldliness, while here and there a shade from other nations has blended in so that the original color is greatly modified. There are various usages, dating from all ages, and of varying symbolism.

THE MADELEINE.

There is no French word for "Merry Christmas." To be sure, the English salutation has begun to creep into the language, but as yet it is so rare that if you should call it out to your landlady Christmas morning, she would be more likely to throw up her arms and exclaim, "*Qu'est ce que c'est que ça,*" than to give a natural response to your greeting.

In Paris the children put their shoes in the fireplace instead of hanging their stockings under the mantel. They hear nothing about "Santa Claus," but are told that the "little Jesus" brought their presents. The Christmas tree is a recent introduction, and is still rare outside of the wealthiest families. But the Christmas log is of more importance than it is in America. It is usually the trunk of an olive-tree, and is lighted early Christmas Eve, being kept burning all night. In some parts of France the quaint, old-fashioned ceremony of "blessing the log" is still performed. Just before supper Christmas Eve the entire family gather around the fireplace, and the youngest child, kneeling before the blazing log, prays that fire may keep the poor and the old warm through the winter, and that it may not burn the laborer's cottage or the ships at sea. Then he blesses the log,

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Boulevard des Italiens

scattering wine over it. After this observance, supper is served, of which turkey is the special feature. The following night, Christmas night, the chief item of the menu is the "bread of St. Étienne," a loaf baked in the shape of a gourd, and popularly credited with miraculous powers.

In other country districts of France a couch of straw is spread under the tables at Christmas, in memory of the Christ-child's manger. In some communities a theatrical performance representing the scenes at the birth of Christ is a regular part of the festivities. At Paris several weeks before Christmas may be seen in shop windows extraordinary representations of the manger at Bethlehem, the infant Jesus lying in the straw, Mary, and the wise men from the East grouped about. The star, made of cheap brilliants, and the cow's head over the manger are ridiculous, being of about the same size and quite out of proportion to the other objects. All the figures are startling studies in color and pose.

The midnight mass Christmas Eve is the characteristic feature of the Christmas celebration in Paris. Many a Frenchman marks this occasion as the one time in the year when he enters a church. Masses are said in almost all the churches, and great care is taken to have beautiful music. Everybody goes to the midnight mass, and one who desires a seat in the Madeleine or St. Augustin's must take his way thither hours beforehand. At the close of this solemnity the true Parisian departs in hot haste for the *réveillon*. A novice is wont to associate the word "réveillon" with the sounding of trumpets, but the Frenchman knows better. To him it means to do just what he is always doing, — to eat strange things and to drink copiously. The réveillon is a supper intended to compensate for the fatigue of the mass. In olden times the French Christmas was even more of a religious fête than it is now, and men observed the Christmas fast before mass, attended a second mass at daybreak, and a third still later, at which a sermon was preached. The réveillon was established as a natural and humane interruption; but it very soon proved its relationship to the fabulous giant who sprang from a pint bottle. The mass at daybreak is still said and the sermon is still preached, but the modern French Catholic can not be counted on for more than the mass at midnight and the supper. After the réveillon he prefers to go home. One can hardly wonder, on reading the customary bill of fare.

The réveillon has a menu peculiar to itself. The usual course of soup is omitted. In its place is served chicken dressed with rice. Then there are four side dishes — hot sausages, tripe, a white and a black pudding. Following this there are tongue and pig's feet and pork for a change, all highly seasoned and garnished. The four corners of the table are adorned with pastry and confections. To be sure, the number of desserts is limited to nine, but still only a goat could be expected to feel devotional after this feast.

The French have a proverb on Christmas weather corresponding to the English, "A green Christmas makes a full graveyard." They put it, "When Christmas has bare gables, Easter has hot firebrands." Another saying is, "When one sees little flies at Christmas, he sees little frosts at Easter."

Aside from the yule-log, the midnight mass, and the réveillon, the French Christmas is marked by little that is distinctive. New Year's day, or "the day of the year," as it is called, is the great popular holiday,— the day of family reunions, of gifts, of remembrances, of friendly greetings. Americans are inclined to think it the day pre-eminent for giving fees, for

while at home it is customary to remember the postman and a few others, in Paris you are expected to make a present to the letter-carrier, the chambermaid, the concierge, the milkman, the errand boy,— to every one, indeed, who wishes you a happy New Year. The practice becomes such a drain on the patience, as well as the pocketbook, that one is tempted to sympathize with the man on whose tombstone was written: —

"Here lies under marble white
The most stingy man of Rennes,
Who up and died on New Year's Eve
For fear of giving *des étrennes*."

The story is told of how a French dignitary outwitted a subordinate, although it is a question which had the best of it. When the intendant, whose honesty the master more than suspected, came with his New Year's bow and greeting, the diplomat said: "Monsieur my steward, I give you for your New Year's present all you have stolen from me during the year." Upon which the steward bowed very low, and answered gratefully, "A thousand thanks."

A few days before the new year the grand boulevards of Paris undergo an extraordinary transformation. The dignified buildings seem to draw back and shut themselves up, while all along the sidewalks spring up little booths and shops, where holiday articles are exposed for sale. The space is rented by the government to small merchants, and for a week there is no doubt about the democracy of Paris. Toys and crockery, gingerbread and hot waffles, New Year's cards, candy, shooting-galleries, flower-stands,— one grand mélange besets the passer-by. It is the small fête of the village magnified to fit the great city.

While the windows of American stores are filled with gifts for Christmas, the shops of Paris advertise *étrennes*, or New Year's presents. The famous Parisian dolls are out in all their glory. There is one place on the Rue de Rivoli, called the Paradise of Children, where every imaginable style of Parisian stares at you from the windows — the *bonne*, or nursemaid, with her cap with long strings, the French dancing-girl, the clown, the baby that can drink from its little bottle. I saw the English game of gobang, and found tiddledywinks masquerading under the appropriate term "The Flea." But the most gruesome plaything I ever heard of is described in the catalogue thus: —

"Railroad catastrophes, with tunnels, collisions, broken bridges, derailings. Complete assortment of victims in all positions."

Considering this last attraction, one can not murmur at the high price.

GYMNASTICS WITHOUT APPARATUS.

BY J. H. KELLOGG, M. D.

THE most perfect system of physical exercises ever devised is probably the one known as Swedish gymnastics, chiefly the invention of Ling, a lieutenant in the Swedish army, who, having learned something, perhaps, from the Chinese, and something from other sources, founded his own school in the early part of the present century. The writer has for many years been familiar with this system of gymnastics, having visited Stockholm for the purpose of investigating it. It possesses great value in the treatment of invalids suffering from various maladies, as well as in the training of the young. It requires, however, a skilled instructor, and while of inestimable service in securing general physical devel-

opment, and in correcting deviations from the normal standard of bodily symmetry, it must be admitted that for the ordinary requirements of hygiene, as regards the general effects of exercise upon the body, equally good results may be obtained from exercises which, from a scientific standpoint, may be technically less correct, and a knowledge of which may be acquired without any considerable effort and without the aid of a teacher.

After studying this question for a number of years, gathering hints from various sources especially from the methods used by the Schott brothers in the treatment of affections of the heart, at Nauheim, Germany, the writer has formulated a plan for exercises which can be taken anywhere, and for the most part even in bed, without the aid of apparatus of any sort. If perseveringly employed, this system may be relied upon as a means not only of maintaining a healthy condition of the muscles and of the body in general, but of securing exceptionally vigorous muscular development.

FIG. 1.

Briefly described, these exercises consist of a systematic series of contractions and relaxations of all the groups of muscles in succession. To illustrate the fundamental principles of this mode of exercise in which no apparatus is employed, make the following simple experiment:—

Hold the arms at the sides with the palms upward flexed. Now bend the forearm till the hands are brought up near the shoulders. The amount of work done in this is very insignificant, and the movement might be repeated many times without producing the fatigue which is necessary to stimulate development, and thus produce increase of strength. But repeat the same movement holding in the hands a moderately heavy book or weight. Observe the different sensation experienced in the arm. The muscles are at work. Tension is felt. A repetition of the same movement, still holding the book in the hand, will in a short time produce a sensation of fatigue or weariness in the arm. Now lay down the book, and repeat the movement, at the same time endeavoring to reproduce in the arm by an effort of the will the same sensation produced by lifting the weight. This is accomplished simply by producing a rigid state of all the muscles concerned in bending and straightening the arm. In other words, an effort is made to hold the arm straight, while at the same time bending it. Before beginning the movement, the arm is made rigid while extended straight at the side.

FIG. 3.

FIG. 2.

Then while maintaining the effort put forth to hold it rigidly extended at the side, the flexor muscles, or those which bend the arm, are energized to act to such an

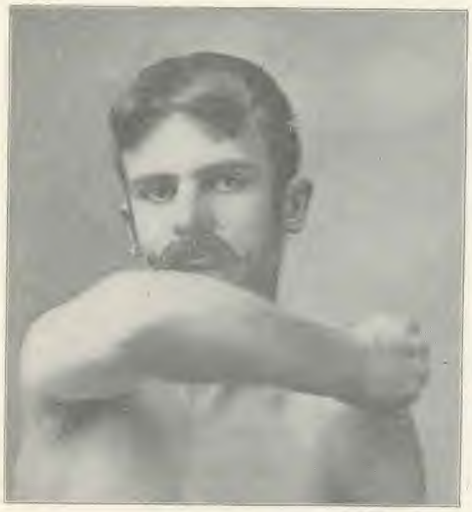


FIG. 4.

extent that they are able to overcome the movement which tends to straighten the arm. No weight is being lifted, but the flexor muscles are made to work the same as if they were lifting a weight, by the antagonizing action of the extensor muscles.

It will readily be apparent that the amount of work done by the muscles can by this means be regulated to a nicety. The flexors can be made to do as much work as can profitably be required of them. After the arm has been flexed, or bent, under resistance, the attention of the will toward the arm is changed so that it is made rigid in its flexed, or bent, position, while the extensors, or straightening muscles, are compelled to extend or straighten it.

FIG. 5.

Below is given a brief description of the several exercises which the writer has found useful. It will be evident that an almost interminable number of combinations may be made from these, by bodily attitudes or positions, whereby the work may be increased or diminished. The following general rules may be laid down as especially applicable to these exercises, as well as to many others :—

1. The will must be energetically employed in each particular movement. This effort for concentration of the will upon the muscular organs employed is a powerful factor in inducing development.

FIG. 7.

2. The acting muscles or groups of muscles must be continuously and regularly energized from the beginning of a movement to its end.

FIG. 6.

3. The movement begins with the part in its natural position, and ends when the part returns to that position.

4. As far as possible let the breathing be deep and regular while exercise is being taken, avoiding the tendency to hold the breath. This can not be altogether avoided; for it will be found necessary to fix the chest in many of the movements. There is no special harm in this, however, unless carried to the extreme. The muscles of the chest,

as well as other muscles, must be fixed in order to be energized; and it is only when thus brought into full action that they are stimulated in such a manner as to secure development.

FIG. 9.

5. In general, it is better to repeat the exercises of a particular group of muscles not more than two or three times before passing to another.

FIG. 8.

6. After each movement of a group of muscles, rest a sufficient length of time to take a few deep breaths before repeating or beginning another.

7. When beginning a series of exercises, care should be taken that the first practice be not too severe or prolonged. The exercises are so simple that the first impression will be that they may be continued almost indefinitely without marked effect; but unless this precaution is observed, the novice will experience on the day following the first employment of these muscles a very uncomfortable soreness. Probably no particular harm will result from this, hence the exercises should not be abandoned, but lighter movements taken.

8. After exercising a group of muscles on one side of the body, it is better to exercise the corresponding group on the opposite side before proceeding to another group on the same side. By this means the corresponding sides of the nervous system are brought into action symmetrically and practically simultaneously, and thus the most vigorous impression is made.

9. At first these exercises should be taken only once a day, but after a few days they may be taken two or three times to advantage. The time used in the exercises need not necessarily be so long as to make it a matter of inconvenience. Those who suffer from insomnia will find it advantageous to spend a few minutes with the exercises on going to bed at night, care being taken to make them very light, the purpose being to draw the blood to the muscles and thus relieve the brain. In general, however, the best time is on first rising in the morning.

FIG. 10.

10. It is obvious that the exercises may

be taken most readily when the body is hampered with but little clothing; but the ordinary clothing worn by men does not seriously interfere with the movements.

FIG. 11.

The dress worn by women will not admit of taking the exercises in the proper manner, on account of the tightness of the waist, and the restricted movement of the shoulders.

11. When the extremities are cold, they may be very speedily warmed by means of these exercises applied with moderate vigor for five or ten minutes or repeated at short intervals. This method of warming the extremities is much to be preferred to artificial means, as it secures the desired object by balancing the circulation and withdrawing a portion of the blood from the brain or other parts of the body in which there is an excess.

12. Persons suffering from organic disease of the heart or from any affection of the lungs which produces shortness of breath, may be greatly benefited by these exercises. In such cases they are more appropriate than any other exercise; but the movements must be executed in such a way as to avoid exciting the heart or lungs, a condition which will become readily apparent by quickened movements of the chest. In other words, the exercises should be taken in such a manner that respiration is not hastened. In these cases the further precaution should be taken to make but one movement with each group of muscles before proceeding to the next, or, preferably, bringing into action the corresponding group of the opposite side. The patient must not hold his breath while going through any movement. All the movements should be taken very lightly, and all "straining" must be carefully avoided.

FIG. 12.

The following is a brief description of a series of movements which we have termed "Controlled, or Self-Resistive Exercises:"—

Position.— In taking the following ex-

ercises, when not otherwise indicated, stand erect, taking pains to hold the chest well forward and stand as tall as possible. The position should be such that it is possible, while standing perfectly erect, to rise upon the toes without swaying the body either forward or backward. When not otherwise indicated, the arms should be at the sides, reaching down as far as possible.

Each of the exercises is to be repeated from three to ten times, the number of times the movements are taken being increased from day to day.

For the Arm and Hand.

1. Fingers separating and closing slowly (Figures 1 and 2).

2. Hand closing and opening.

3. Bending and extension of the wrist-joint.

4. Combine the preceding movements, beginning with abduction.

5. With the arms bending at the elbow and extending forward, twist the forearm so as to turn the arm down, then in the opposite direction.

6. Bend the arms upward to the position shown in Figure 3.

7. With the arms reaching downward, twist the whole arm, first in one direction, then in the other.

8. Fingers flexion, wrist flexion, forearm flexion, forearm extension, wrist extension, fingers extension, fingers abduction.

9. Flex the arm across the chest, as shown in Figure 4. Slowly extend the arm outward and backward (Figure 5).

10. Raise the arms slowly from the sides forward and outward. Slowly return to position.

11. Slowly raise the arms sidewise upward as far as possible. Slowly return to position.

12. Slowly bring the arms to position shown in Figure 6. Then carry the hands directly upward as far as possible. Reverse the movement. Slowly return to position.

13. Circumduction. Carry the arm from its position at the side while holding it straight, first in front of the body toward the left as far as possible, then carrying the hand upward to a vertical position over the head, continuing the movement outward, sweep extending backward as far as possible, finally bringing the arm back to position at the side. The arm should be kept rigidly extended and reaching outward as far as possible. The movement should be executed very slowly with first one arm, then the other. Repeat four times.

Note.— Execute the preceding finger and wrist movements, 1, 2, 3, while standing erect with the arm held in the positions indicated as follows: —

1. Arms at the sides, thumbs turned outward.

2. With the elbows at the sides, the arms half flexed, forearm extending forward, palms upward.

3. The position shown in Figure 7, palms downward.

4. The position shown in Figure 8.

5. Arms reaching forward, palms upward.

6. Arms reaching forward, palms downward.

7. Arms reaching outward, palms upward.

8. Arms reaching upward, palms forward (Figure 9).

For the Feet and Legs.

In taking the following movements, stand in the correct position, with the hands upon the hips, hands touching hips lightly, balancing the body upon one leg while the movements are executed with the other.

1. Separation and closing of the toes.

2. Turn the foot upward and extend the toes.

3. Turn the foot downward and extend the toes.

4. Flex the leg, raising the foot backward as far as possible with the ankle extended.

5. Raise the leg outward, extending the ankle-joint. Return to position.

6. Raise the knee as shown in Figure 10, and slowly return to position.

7. Turn the toe outward as far as possible, then inward.

8. Raise the heel, allowing the toe to glide upon the floor, carry it across the middle line of the body as far as possible to the opposite side. Continue the movements until the toe rises upon the floor, then in a sweep upward and forward, raising the toe as high as possible while keeping limb extended, carry the limb outward and backward until the toe again touches the floor, then let the foot glide back into position. Maintain the trunk constantly in an erect position and the limb fully extended during the movement.

FIG. 13.

Exercises for the Head.

These exercises should be taken with the body in an erect position, the hands resting upon the hips.

1. Bending the head forward and backward, draw the chin in with as much force as possible.

2. With the chin well drawn in, bend the head alternately to right and left.

3. Twist the head to the left.

Exercises for the Trunk.

1. Standing with the arms reaching upward fully extended, bend alternately backward and forward.

2. With the hands resting upon the hips, bend alternately to left and right.

3. With the hands placed at the back of the neck, twist to left and right.

4. Lying upon the back, raise the head forward.

5. Lying upon the back, raise the leg upward, with foot extended.

6. Lying upon the back, raise head and leg together (Figure 11).

7. Lying upon the face, raise the head backward.

8. Lying upon the face, raise the leg backward. Also raise leg and head together (Figure 12).

Breathing Exercises.

1. Lying on the back, breathe deeply, expanding sides and abdomen.

2. Deep breathing, expanding the chest and trunk fully, and breathing out. Hold chest in position for complete expansion, drawing the abdominal muscles as vigorously as possible.

3. Empty the lungs, close the throat, and then execute the movement of inspiration by breathing in, raising the chest as high as possible. The effect of this is to draw the stomach and other abdominal organs upward (Figure 13).

4. Fill the lungs as full as possible,

FIG. 14.

lightly percuss the chest at the sides, breathe out with firm pressure on sides, so as completely to empty the chest. The purpose of this movement is to overcome the rigidity of the chest by increasing the elasticity of the cartilages connecting the ribs.

In taking these exercises, the movements should be voluntarily controlled; that is, in using the flexor muscles, resistance should be made by the extensors, and vice versa. By this means each set of muscles may be able to do as much work as is required for its healthy development, and a perfect balance will be maintained between the antagonizing muscles, and so symmetrical development will be secured. It should be remembered, however, that in order to secure results from this method of exercise, it is necessary that the acting muscles be thoroughly energized; that is, the highest possible degree of tension must be maintained during the muscular movement, as shown in Figure 14, and the movement executed very slowly.

The movements should begin with the joints farthest removed from the trunk, and each group of muscles should be exercised in succession, until the trunk is reached. Care must be taken to bring the will to bear upon individual groups of muscles. The effect of this is not only to develop the muscle, but to bring it under the perfect control of the will.

LA GRIPPE AND HOW TO TREAT IT.

BY F. M. ROSSITER, M. D.

THIS disease is rapid in its onset, and needs to be dealt with summarily. If one thinks he can neglect it with impunity, as so many do ordinary acute "colds in the head," he will be sadly disappointed.

La grippe is an acute, infectious disease, due to a specific germ, and travels from east to west along lines of commerce. While it is generally considered to be no respecter of persons, it must, as do all other diseases, respect health. La grippe seeks out carefully those who make waste-boxes of their stomachs by dumping into them all sorts of odds and ends indiscriminately, those who mistreat and overload their digestive systems until abused nature cries out and invites disease. La grippe pays its personal respects to men who indulge too freely in the "flowing bowl," and by no means passes by those who dissipate their energies, or who overwork mentally or physically. It is devoted also to those who plug up every crack and keyhole, and have poor ventilation in their sleeping-rooms; it has a great affinity for people who never bathe, except by accident, during the entire winter, and who put on extra clothing for every five degrees of lowered temperature. La grippe loves, above all, the aged, those who are weak and whose vital fires burn low, whose furnaces are banked by the ashes of waste, and by poisonous and excrementitious substances which stop up the flues.

Influenza, in and of itself, is not a very dangerous condition, but it is made so by its complications and by the readiness with which it is transformed into some other serious disease. The most common complications are pneumonia, inflammation of the kidneys, inflammation of the nerves, and insanity. One year ago, in an epidemic in Russia, la grippe was followed by fatty degeneration of the heart, insanity, and after an attack the patient was often left a physical wreck.

This disease usually begins abruptly, the first symptoms being great lassitude, and chilly sensations along the back and neck; the head feels heavy, and severe headache follows, with severe pain in the back and in the bones; the muscles ache, and any exertion is an effort; the fever is

not so very high, rarely rising above 103°. The catarrhal symptoms are in many cases very pronounced; the eyelids are red, sneezing is common, nasal secretions are increased, and are often very irritating; there is some cough. At times the digestive tract is made the point of attack, and even if not, the stomach is very easily upset, so great care needs to be taken in selecting proper foods.

The treatment of this disease should be vigorous; if begun at once, it need not take more than twenty-four or forty-eight hours to avert an attack. The first indication is absolute rest, preferably in bed; the second, to relieve the congestion of the mucous membrane of the nose and respiratory tract, also of the brain and its coverings. This is best accomplished in the following way:—

1. Take a large enema with the water at 107° F., to cleanse the bowels.

2. Place the feet and legs in water nearly up to the knees, having the water as hot as can be endured, and add hot water constantly. Continue this for twenty minutes or longer, at the same time drinking freely of hot water or hot lemonade. While taking this treatment, apply a compress wrung out of ice-water, to the entire head, not to the forehead alone. This treatment should be continued until one perspires freely.

3. Then go to bed, keeping the legs warm by wrapping them in woolen blankets.

4. If it is not convenient to employ the hot leg bath, fold a woolen blanket once, soak it in boiling water, wring it out quickly, and as soon as possible wrap it around the lower extremities, from the hips to the toes, surrounding all with a dry woolen blanket. Leave both on for at least half an hour or until thorough perspiration is induced. During this treatment keep a cold compress on the head. After either of these lines of treatment, one may be sponged off with water at 85° F., into which a handful of salt has been thrown.

This treatment will usually be followed by weakness, but rest in bed, which is now very essential, will soon restore the patient to health.

The diet is no unimportant part of the treatment. If an exclusive fruit diet is used for twenty-four or thirty-six hours, recovery will be much more rapid and complete. The fruits should consist principally of baked apples, sweet or sour, good eating apples, and sweet oranges. This fruit is not very nourishing, but it is cleansing to the digestive tract, and gives the stomach a chance to rest. At the same time the acids of the fruit satisfy thirst, and stimulate the kidneys to greater activity.

The less medicine taken in la grippe the better; for this is a disease that can not be broken up with a hot whisky sling, a dose of Dover's powders, or any antipyretic drug. Drugs and all forms of alcohol should be avoided, for they disturb digestion and thus aggravate the disease.

If one treatment as described does not break up an attack of influenza, it may be repeated the next day. The feet should be kept warm, the room well ventilated and cool,—not above 70°, but no draft should fall on the patient.

This treatment is simple, rational, within the reach and means of all, and is the most effective remedy for la grippe.

FAIN would I hold my lamp of life aloft,
Like yonder tower built high upon the reef:
Steadfast, though tempests rave or winds blow soft,
Clear, though the sky dissolve in tears of grief.—*Celia Thaxter.*

THE TREATMENT OF PNEUMONIA AND PLEURISY.

BY DUDLEY FULTON, M. D.

PNEUMONIA is a germ-disease, the specific germ being the micrococcus of Fraenkel; but primarily and to a large extent, pneumonia and other diseases of the respiratory system are circulatory disturbances, the latter lessening the vital resistance of the tissues, the germs then producing their pathogenic effects.

In cold and variable weather, the sudden changes in the temperature of the air that passes into the lungs produce rapid contraction or dilatation of the finer blood-vessels of the lungs and bronchial tubes, as the cold or warm air, as the case may be, comes in contact with the walls of the vessels.

Pneumonia is ushered in by a severe chill. It is barely possible to check the further progress of the disease by vigorously sweating the patient. This is easily done by placing him in a wet-sheet pack, or by covering him with blankets, and surrounding him with hot bottles, placing a hot bag to his spine, and by giving him hot water to drink. Before the pack and during its progress, the patient's head should be bathed with cold water.

The method of applying the wet-sheet pack, illustrated by Figs. 1, 2, and 3, is as follows: —

Take two or three heavy blankets, one woolen blanket, and a large linen or cotton sheet. Spread the dry blankets upon a bed or straight lounge, making them even at the top.

With the bed and patient all ready, gather one end of the sheet in the hand, and dip it in water at 100° F. Wring so that it will not drip much, place its upper edge even with the upper edge of the inner blanket, and spread it out quickly each side of the middle sufficiently to let the patient lie down upon his back, letting the ears come just above the upper border of the sheet, and extending the limbs near together.

The sheet will now be about 90° F., and the process of wrapping should be rapid. The patient should raise his arms while the attendant draws over him one side of the wet sheet, taking care to bring it in contact with as much of the body as possible. Tuck the edge tightly under the patient on the opposite side. Now let him clasp his hands across the chest, and bring up the other side of the sheet.

FIG. 1.

Grasp it by its upper corner with one hand, and draw it down over the shoulder lengthwise of the body; then, placing the other hand upon the covered shoulder and holding the sheet firmly in place, carry the corner upward upon the opposite side, and tuck it under the shoulder,

thus drawing the edge of the sheet well up under the chin. Tuck the edge of the sheet firmly under the body along the side, carefully enveloping the feet.

FIG. 2.

Now bring up the inner blanket, tucking in one side at a time, and also the other blankets, being careful to exclude all air at the neck, and allowing the blankets to extend below the feet, so that they can be folded under.

It is not desirable that the patient be bound very tightly; all that is necessary is the exclusion of air, and as the neck and feet are the points at which it is most likely to enter, these parts should receive particular attention, as directed. If too tightly bound, the patient will be more likely to be nervous than if allowed some freedom.

The first stage in the progress of this disease is that of "engorgement," the lung capillaries and blood-vessels becoming overfilled with blood. To combat this, ice-bags should be placed over the affected lung. This contracts the blood-vessels of the lung, and inhibits the abnormal circulatory activity in that part. The ice-bags may be followed by the application of a hot bag for fifteen minutes every two hours. This does much to relieve the severe pain in the affected side. There is some room for discussion as to whether the ice-bag or the cooling compress is to be preferred as a means of reducing pulmonary congestion. Some excellent authorities maintain that cloths wrung out of water at 60° F., placed over the affected part for thirty or forty minutes, afford a means of relief preferable to the ice-bag. A slight warming of the compress has the effect to drive the blood to the surface, while the frequent renewal contracts the blood-vessels in the affected lung. The skin should be vigorously rubbed whenever the cold compress is removed, and if the ice-bag is used, it should be withdrawn at least once in every four or five minutes, and the parts rubbed with the hands to encourage surface circulation.

FIG. 3.

The part of the lung engorged becomes functionally useless, the air vesicles and smaller bronchi becoming filled with inflammatory exudate, blood-corpuscles, and tissue detritus, as is noted in the illustration (Fig. 4).

The high fever in pneumonia should be reduced by the graduated bath or by the cold sponging and friction previously described. Cold enemas are useful. The effect of cold water-drinking upon the activity of the kidneys is often unappreciated. However, this is a matter of the utmost importance, for in pneumonia, as in infectious fevers, the high temperature and, in fact, nearly all the symptoms are due to the presence in the system of poisons produced by the germs characteristic of the disease. The stimulation of the kidneys by copious water-drinking aids greatly in the removal of these poisons from the body. The prolonged wet-sheet pack has been shown to be one of the most efficient of all measures for relief in pneumonia. The pack should be continued until sweating is produced, which requires from one and one-half to two hours. The general cold impression made by the first application of the pack excites the activity of the lungs, causing coughing, thus freeing them from the accumulating mucus, stimulates the flow of blood through them, so antagonizing passive congestion, which after the first onset of the disease is one of the greatest difficulties to be combated, and especially stimulates the vital resistance of the general tissues, enabling them to combat the evil influence of the poisons circulating through the blood, as well as the germs which produced them.

The lung being functionally inactive, poisons that are normally eliminated by it accumulate in the system. The treatments suggested are therefore doubly indicated, since they not only reduce the temperature, but keep the skin, the kidneys, and the bowels functionally active; thus the liability to heart failure is lessened. An ice-cap may be useful when there is marked delirium.

The dyspnea and labored breathing incident to the inactivity of the lungs demand free ventilation of the sick-room.

The diet in infectious fevers should be simple and easily assimilable. Highly nitrogenous foods, such as meats and meat preparations of all sorts, which require digestion in the stomach, must be avoided for the reason that the stomach produces little or no gastric juice in fever, at least while the temperature is high. Ripe fruits, fruit-juices, and such easily digestible preparations as baked sweet apples, stewed prunes, prune purée, and most other well-cooked, sweet, and subacid fruits are appropriate foods. Malted preparations are all of service. Such farinaceous substances as browned rice and zwieback are especially to be recommended. Fruit-juice prepared with newly made or freshly heated zwieback and stewed fruit of some sort is an appetizing and appropriate food for a pneumonia patient. Buttermilk and kumyss are the best form in which milk can be commended.

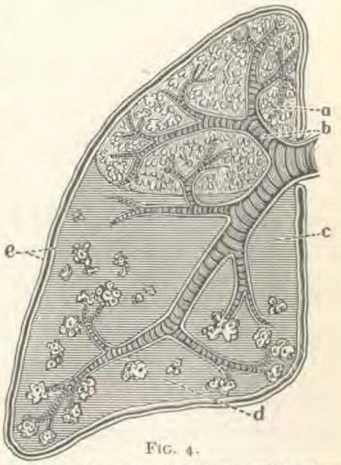


FIG. 4.

a, Normal lung; b, normal bronchial tube; c and d, lung tissue in pneumonia; air vesicles filled with exudate, red corpuscles, etc.; e, layers of pleura.

The different stages of pneumonia pass insensibly into each other until "resolution" begins. The dead cells and the exudates are absorbed into the general

circulation and thrown off in the sputum. To hasten the absorption, the circulation

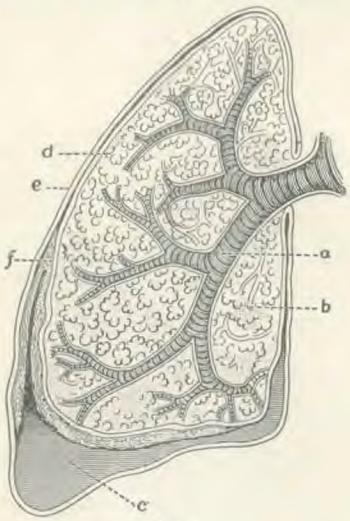


FIG. 5.

a, Bronchial tubes; b, normal lung tissue; c, inflammatory exudate poured out into pleural cavity, crowding lung tissue upward; e, d, outer and inner layers of pleura, respectively. Between them is pleural cavity (f).

should be quickened by alternate applications of heat and cold over the affected area. Fomentations as hot as can be borne, followed by friction with ice, answer very well. Between treatments a heating compress may be worn. A cloth wrung out of cold water is applied to the chest and covered with several layers of flannel or cotton and one layer of oiled silk. Upon its removal the chest should be washed with cold water, to protect the patient from taking cold. The parts should be rubbed with vaseline, then covered with a thick flannel cloth.

The crisis occurs from the fifth to the ninth day; sometimes as early as the third, and occasionally as late as the twelfth. The fever falls, and convalescence begins. At this point the patient should receive the best nursing, so that complications may be avoided and the lung may return to its normal function. Special care should be taken to avoid chilling the patient at this stage. Prolonged chilling of the surface, by producing congestion of the lung, may lessen its resistance, and give rise to an extension of the disease in a new territory and the renewal of the whole morbid process.

The specific cause of pleurisy is unknown. Formerly, cold was believed to be the most important etiological factor, but increased knowledge of bacteria leads us to place the influence of cold as one of the strong predisposing causes, and to regard the action of bacteria upon the pleural surfaces as the exciting element. In pleurisy vital resistance figures as largely as in typhoid fever or pneumonia.

It is to be remembered that the pleura lines the thoracic cavity, that it is reflected upon itself, and that the inner reflected layer covers the lung, as shown

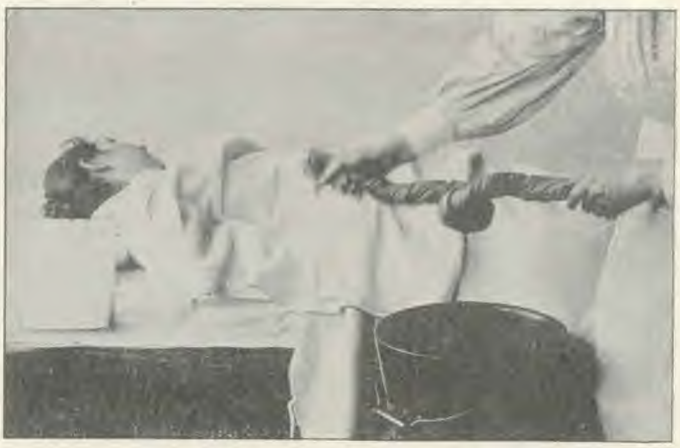


FIG 6. WRINGING THE FOMENTATION.

in Fig. 5. Between these two layers of the pleura is the pleural cavity, a blind sac.

Pleurisy is an inflammation of these two layers of pleura, causing a swelling

and thickening of them. The onset is sudden, and is ushered in by a severe chill. As in pneumonia, sweating should

FIG. 7. PLACING FOMENTATION ON PATIENT

be instituted. If this is of no avail, ice-bags should be placed over the affected area to check the inflammatory process. This treatment is more efficacious in pleurisy than in pneumonia, the blood-vessels being more superficial.

As the swollen, inflamed layers of pleura rub together in the respiratory movements of the chest, sharp, stabbing pains are produced. This distressing symptom is best met by the use of ice-bags alternated every one or two hours with fomentations. The method of applying fomentations is illustrated by Figs. 6, 7, and 8. A strong flannel band should be placed about the lower part of the chest and bound tightly so as to limit the movement of the affected lung. Sometimes the inflammatory process pours an exudation out into the pleural cavity. The amount varies from a pint to three or four quarts, depending upon the amount of fluid; the lung is compressed, and the other organs are displaced.

Frequently an entire lung is crowded into the upper part of the thoracic cavity, a shapeless mass of lung tissue without function. Such a condition demands the withdrawal of the fluid with the aspirating needle, by the physician in charge. This allows the lung to expand and to resume its function. In so-called "dry" pleurisy no effusion is formed.

Labored breathing is a usual symptom in pleurisy, a part or the whole of one lung being affected; consequently, as in pneumonia, plenty of fresh air is necessary.

The importance of favorable diet and

FIG. 8. FOMENTATION COVERED.

the need of keeping all the functions of the body active, as well as of good nursing, must be emphasized in pleurisy no less than in pneumonia and typhoid fever.

A COLD IN THE HEAD.

BY A. B. OLSEN, M. D.

CORYZA, or an acute cold, is a mild inflammation of the lining membrane of the upper air-passages, particularly the nasal cavity, the soft palate, the tonsils, and the uvula. It is usually characterized by local redness and pain, together with more or less swelling. The more common symptoms are sneezing, a general feeling of chilliness, headache, slight fever, with thirst, loss of appetite, and aching of the limbs. In the first stages the upper air-passages are congested and swollen, producing a "stuffy feeling," and it is with difficulty that the person breathes through the nose. Very soon a copious discharge from the nose sets in. This is at first watery in character, but in two or three days possesses a greater consistency, and is somewhat yellowish in color. In severe attacks there may be congestion of the eyes and tenderness to light, with an abnormal flow of tears.

Some people are much more susceptible to cold than others. Indeed, this tendency sometimes appears to be hereditary; at least, certain individuals seem to be specially predisposed.

The causes of a cold in the head are numerous. Abrupt changes in the weather, exposure to cold when the body is in a heated condition and perspiring freely, are common causes. Sudden changes of all kinds, either from great heat to cold or from cold to great heat, are exciting causes. Drafts are also harmful. Breathing "crowd poison" in a close, overheated room is a prolific cause of colds. Foreign substances in the air may act as irritants, and produce an acute coryza. Among these we might mention tobacco smoke, which often induces an acute sore throat. Irritating fumes may produce the same effect.

A very mild cold may be almost purely local, with a slight rise of temperature, but often the attack is more severe and the ears are involved. This is brought about by the setting up of an inflammation in the Eustachian tubes, which spreads to the middle ear and may cause deafness. There is usually more or less sore throat, sometimes producing pain, especially on swallowing, and it is with difficulty that the person can speak. At other times the swelling extends down and involves the larynx, or voice-box, producing hoarseness. If care is not taken, it may attack the bronchial tubes.

The treatment of a cold is very simple, but nevertheless important. Rest, sleep, and a light diet, or better still, abstinence from food for a day or two, often suffice for a cure. It is an excellent plan to administer an enema to cleanse the bowels thoroughly. This might be followed by a hot mustard foot bath, with a cold compress to the head, the patient meanwhile drinking three or four glasses of hot water. The water should be taken as hot as possible. This will lead to free perspiration and an opening of the pores of the body, tending to restore the circulation of the blood. After the feet have been soaked in hot water for ten or fifteen minutes, immerse them for a moment in cold water, and dry with a rough towel. The patient should now be disrobed and placed between sheets or blankets, and a cold friction sponge administered, the directions for which are as follows: —

Procure a large basin of ice-water and a mitt made of some coarse cloth, or, if nothing else can be obtained, a small Turkish towel may be used. Expose only a part of the body at a time, taking

care that the rest is protected from cold. Hold the patient's arm in the left hand, wet the mitt or towel with the ice-water, wringing it out partially so that it will not drip, and rub the upper arm briskly and firmly until a bright red glow is produced. This is well shown by the second illustration. It is usually necessary to dip the mitt in the ice-water two or three times in order to keep it moist. As soon as a healthy glow has been produced, dry the arm quickly with a warm, dry Turkish towel. Now take the upper arm and proceed in the same way. After the left arm has been sponged properly, take the right arm, then the chest, abdomen, and lower extremities. Finally turn the patient over, and sponge the back in the same way. The rubbing should be brisk and vigorous in order to produce the desired effect. If this is not done, the patient will be chilled and the treatment will be injurious rather than beneficial. However, if rightly given, it will act as a tonic and tend to restore the proper circulation of the blood. The patient will be left warm and comfortable, and in a state likely to induce sleep. It is well to provide a bag of hot water or a hot brick for the feet. Both of these treatments are very simple, and can easily be given in an ordinary home.

Such vigorous measures, together with the use of a pocket vaporizer, are usually sufficient to effect a cure. The vaporizer should be used very frequently for the first twenty-four or forty-eight hours.

As indicated before, the diet should be very light, consisting of fruits and toasted breads. Toasted granose, toasted whole-wheat wafers, sticks, zwieback, together with unleavened breads, furnish a good diet. Fruits, such as grapes, pears, peaches, canned and dried fruit, especially stewed prunes and steamed figs, form an excellent diet. The variety should not be too large, and the quantity should be rather small. This will hasten recovery.

Care must be taken to prevent chilling, and thus aggravating the cold. The patient is naturally much more susceptible to a draft or any kind of exposure than a well person.

When any member of the family has taken cold, the other members should use extra precaution not to become affected by it also. Coryza is probably a germ-disease, although the specific microbe has not yet been discovered. It is not uncommon for a cold to run through the family, from one member to another. Consequently, every precaution should be taken, and the body protected from exposure in every way possible. The so-called process of "hardening," as usually understood, can not be too severely condemned. It is often productive of great harm. Undue exposure for the purpose of hardening the body is dangerous, and should never be indulged in. This is particularly true in the case of children, who are very susceptible. The right way to harden the body is to take the proper amount of exercise and sleep, to live much out of doors in the open air and sunshine, and to eat a moderate amount of wholesome, nutritious food.

THE DIVINE AVERAGE.

LET the weak man bear bravely all weakness,
The strong man wear gently all strength:
In the grave, that only republic,
Equality links them at length.

—*Henry Austin, in The Independent.*

HOW TO AVOID WINTER FUNERALS.

BY DAVID PAULSON, M. D.

IT is a striking fact, but none the less true, that we can largely regulate the matter of winter funerals. If people would strive half as vigorously and systematically to keep funerals from the door as they do to keep the proverbial wolf from the door, there would be fewer premature deaths and only a small percentage of the present amount of sickness.

Frequently when a man learns that his neighbor can not afford to send his children to school, he demonstrates almost to a mathematical certainty that it is owing to said neighbor's mismanagement of business affairs; but when his own children sicken and die from pneumonia, typhoid fever, or some other largely preventable disease, he mourns over it as a sad bereavement instead of recognizing it for what it virtually is,—a harvest representing the sum total of various sowings.

Many, through violations of physical laws, are in reality constantly sending out invitations to disease and death, and it would be surprising if some of these invitations were not accepted.

The air that is so necessary for our life may become a swift messenger of death. In summer, when the room becomes oppressive from the heat, its very condition suggests the opening of windows. In winter the air is much more likely to be laden with poisonous gases, but because it is warm this important fact is generally overlooked. However, poison-charged air will kill as readily at one temperature as another. Hence every living-room should be so arranged that the fresh air can have free entrance. It should come in near the floor, already heated, or if it must come in cold, some contrivance should be placed at the top of the window-sash by means of which the cold-air current will be directed upward toward the ceiling and so will diffuse downward uniformly all over the room, instead of descending like a waterfall over the window, thus producing unpleasant drafts, and tempting one to close the inlet entirely. It does not require much ingenuity to arrange some means of carrying off the foul air. A wooden box extending along the side of the chimney up to its outlet through the roof will generally be sufficiently heated to create an upward draft. Openings can be made in this shaft so that it will serve as an excellent escape for foul air.

Multitudes of people pave the way for their own funerals by wearing unsuitable clothing. Furs, extra wraps, and other unnecessary garments are put on, layer after layer, about the trunk, where the circulation is strongest because those parts are nearest to the heart, and therefore in some respects do not need so much additional protection, while the feet, which are the farthest away from the center of circulation, have perhaps only a quarter of this amount of clothing. From a health standpoint the best place to wear a chest protector is under the feet.

A condition in which the feet are constantly cold produces contracted blood-vessels. This means that blood which should be circulating in the limbs is congesting in some of the internal organs, which are already debilitated by the excessive amount of clothing to which they have been subjected.

In any but intensely cold weather the furs and scarfs which are wrapped around the neck are not only a needless luxury but also a positive harm, for they produce such a weakened condition of that

important area that when it is exposed to some slight draft either in the house or outside, the result is a most distressing and obstinate cold. The poor girl imagines that if she were a rich man's daughter she would be able to dress comfortably and her feet would not be cold. But in reality in many respects she would have to suffer more intensely than she now does, for the inflictions of fashion often cause as much discomfort and disease as the stern conditions of poverty.

The clothing of the waifs in the streets, though very likely to be deficient in quantity and quality, is usually quite uniformly distributed over their bodies, so that the cold weather acts as a general tonic to the entire nervous system and skin. This is a great factor in accounting for their constitutional endurance, a hardiness which the children of the rich might well envy.

It is a natural instinct to take some form of exercise when we are cold, and if this suggestion of nature is not heeded, it means that the body will begin to decay and that the fires of life, which, like the fires on the hearth, ought to burn more brightly in winter than in summer, will flicker and grow dim, and sometimes even be completely extinguished. To avoid funerals in winter it is necessary to take plenty of exercise, no matter how severe the weather.

Thousands of sufferers from consumption, when questioned as to its origin, will specify that it began with a severe cold. A little cross examination, however, will often reveal the fact that this cold was preceded by a sumptuous Thanksgiving spread or some other marked digression in diet, or else by some long-continued digestive disturbance.

Favorable conditions for contracting a cold are always about us, but it is only when we allow ourselves to sink a little below the normal health line by some conscious or unconscious violation of nature's laws that we are afflicted with colds. Colds in their turn create in the system a still more favorable soil for the germs of consumption and pneumonia, or for microbes belonging to similar tribes.

The actual condition of any part of the body depends almost entirely upon the character of the blood; for the body is fed, renovated, and nourished almost entirely by the blood.

The natural food products of the earth, prepared in a simple, healthful manner without the addition of such blistering substances as spices and condiments and without being smeared with grease, tend to produce, when properly eaten at proper intervals, a healthy and pure condition of the blood.

How strange it is that people imagine that the human system possesses the power of making clean, pure blood out of such unnatural mixtures as are commonly found on our tables. Even portions of dead animals are tumbled into the stomach in such a hasty, careless, and indifferent manner that one might suppose it were simply a receptacle for useless things.

Experience has taught many that in summer they can not tolerate such gross articles of food as meat and fiery spices; yet in winter these same persons seem to possess a certain degree of immunity to their effects, and therefore conclude that heavy animal food and condiments are serviceable in winter but unwholesome in summer. This is explained, however, by the fact that under the tonic influence of cold weather we are able with apparent safety to digress more widely in matters of diet than we can under the debilitating influence of hot weather; but in so doing we are nevertheless sowing seed for a crop of misery when spring comes. At this season a great many people make the suicidal attempt to tide themselves over by means of some "spring

tonic," the majority of which tonics owe their chief virtue to the amount of cheap whisky which they contain, in reality possessing no virtue whatever.

By exercising care with regard to diet, clothing, exercise, ventilation, it is possible, nay easy, not only to avoid funerals in winter, but also to do away with all necessity for "spring tonics" other than those provided by nature. In this way the number of funerals the year round may be minimized, and the undertaker reduced to depend upon some other business for his main support.

WHAT THE COFFEE-POT TOLD THE TEAPOT.

BY MARY HENRY ROSSITER.

"YOU look pretty black this morning," said the teapot to the coffee-pot, as the latter joined her after breakfast on the kitchen stove.

"I feel black," said the coffee-pot. "There 's a man in that dining-room that ought to be scrubbed."

"Dishpans and soap," exclaimed the teapot, "what has he done?"

"Talked about me and my contents as if I were nothing short of a murderer," answered the coffee-pot. "Not a drop of coffee would he touch. Said it was poison."

"Dear me," said the teapot, bubbling a little, "is that all? I would n't worry about that if I were you, for you know there 's some truth in it, shut your spout all you 're a mind to."

"Well," said the coffee-pot, popping his cover open in a hurry, "he said worse things about you than he did about me, anyway."

"What did he say?" demanded the teapot, bubbling more.

"He said that every pound of tea contains enough poison to kill forty cats, for one thing. He said that tea could make a man drunk just as well as alcohol; that lots of shaky old ladies were made so by drinking it. He told about one woman who had delirium tremens as the result of drinking that nice black stuff you take in for supper."

At this the teakettle fairly boiled over as she said, "He must be a very disagreeable person, indeed, and very rude, too, to talk to people that way right at their own table."

"Well, I 'll have to admit, to be fair," said the coffee-pot, "that Mr. Preston did ask his opinion. He said he wanted to convince Mrs. Preston that it was just as bad for her to drink tea and coffee as it was for him to smoke tobacco. And that man actually had the audacity to say that he did n't see much difference."

"The monster," cried the teapot in a rage, dancing up and down on the griddle, while Mr. Preston's favorite pipe fell off the shelf, and broke, with a giggle, upon the floor.

"Yes, he did," continued the coffee-pot. "He said that tea, coffee, cocoa, chocolate, all belong to the same family so far as their bad effects are concerned. Tea, though, is the worst of them all,—the wicked and crafty mother, so to speak, who prepares the way for the rest, and eggs them on to destroy the nerves, and make people dull and stupid. He talked very learnedly about saliva and starch and glands, and said that when a man drinks half a cup of tea with his meal, he takes enough of some queer-sounding thing into his stomach to spoil the digestion of all the bread and potatoes he has eaten. He said it takes only ten grains of

this stuff to make a man sick, but that an ordinary cup of tea contains two grains. He talked about tea's being an antidote for opium and——"

"Well, I think you 've told enough about tea," declared the teapot. "Why don't you tell a few of the things he said about your contents?"

"Most of the things he said about me were only echoes of your shortpourings," retorted the coffee-pot. "The worst thing he said about me was that my coffee made people think they had had something to eat when they had n't, or words to that effect. He said they filled up their stomachs with coffee until they had no room for food, and that the coffee acted as a stimulant, making them feel as if they had taken real nourishment. He told an exasperating story about an English physician, who, with his assistants, took an infusion of two ounces of coffee just to see what it would do, and it made them all unconscious for several hours."

"Well, I think you 're making a big fuss for nothing," said the teapot. "Don't you know that people never pay any attention to scientific facts? They go right straight along doing just as they please, regardless of the most alarming and convincing arguments, so you need n't be afraid of losing your job right away."

"But this man was in such dead earnest," rejoined the coffee-pot, "and what he said was so terribly sensible. Why, he showed how coffee causes headache, and nervousness, and insomnia, indigestion, dizziness, palpitation of the heart, and I don't know what all. He said it made people hollow eyed and thin cheeked and yellow, and Mr. Preston said, 'There you are, my dear, you see it 's just as bad for you to drink coffee as for me to have a cigar every day. Confess it.'

"And what did Mrs. Preston say?" inquired the teapot.

"Oh, she laughed a little, and said, 'You mean thing.' Then she became more serious, and said that she knew, of course, that those things were true in general. She had heard them before, but she did n't believe she could give up her coffee unless somebody convinced her that the little coffee she drank was doing her individually a particular and specified injury. She said she could n't go on general principles when it came to eating. That made me shake clear to my grounds, for nothing could have been more conclusive than what she had just heard."

"Yes, you see it 's just as I told you," sputtered the teapot. "But she would n't be convinced, not even if she could actually see those poisons winding through her body, and spoiling the ends of her nerves. People are never convinced unless they want to be."

"That 's comforting," said the coffee-pot. "I 'm sure I 'd hate to be thrown on the ash-pile while that old patent apple-parer is out there. I can't bear to associate with broken tinware, and you 're positively certain to get dents in your side when you 're thrown outdoors."

"I 'm not afraid," said the teapot, subsiding to a simmer. "Let 's talk about something more agreeable."

But it was too late. Bridget had heard them boiling over, and now came to the stove to separate them. She whisked the teapot into the sink, shut the cover of the coffee-pot, plugged its spout, and set it back to keep hot for her own breakfast.

"It 's all nonsense what that man was saying about coffee's being unhealthy," she said to herself, sniffing the fragrant odor. "Anyhow, if it is true, I don't want to know it."

A CHRISTMAS SONG.

BY MRS. S. M. I. HENRY.

LOVE'S wondrous plan
Is ripe, as grapes that burst with wine,
And down through starry depths of song
Descends the gift divine.

Jesus is born!
O joy! too full for heaven to hold.
The song of triumph swells afar —
Wakes every harp of gold.

But earth is hushed.
With unbelieving heart she hears;
A wound is bleeding in her breast,
Her eyes are dim with tears.

This feeble child —
He can not be the promised King;
To heal her wound that little hand
No leaf of balm could bring.

That humble child —
O, heart of pride, you needs must break!
This day Jehovah takes the form
Of childhood for thy sake.

That nursling weak
Shall nourish thee with bread divine,
And health and life are in the touch
Of that small hand in thine

The little heart
That struggles in that infant breast
Shall bear thy woe, shall break, and bleed,
For thee to purchase rest.

DISEASES OF CHILDREN IN WINTER.

BY F. M. ROSSITER, M. D.

FROM the infant one day old to the octogenarian there is one succession of diseases to be constantly resisted. Fifteen hundred or more different maladies are always lurking near, ready at the slightest provocation to swoop down upon us. The early years of life seem particularly to invite disease, for children are more susceptible than adults. More deaths occur among children under four years of age than at any time during subsequent periods. These frightful inroads upon human life have been checked somewhat by sanitary and hygienic measures, but with all the progress in the therapeutics of disease the mortality among children is still great.

The diseases to which children under ten years of age are most susceptible in winter are scarlet fever, measles, diphtheria, cerebrospinal meningitis, whooping-cough, and croup.

Scarlet fever and diphtheria rank as the most dreaded of all the infectious diseases that now prevail. Smallpox was long ago shorn of its worst horrors. Scarlatina and diphtheria are both on the increase, and especially the latter. Scarlet fever is very sudden in its onset, the symptoms being as a rule severe from the very beginning; but I have noticed that the disease pursues a milder course in children who have lived upon a carefully regulated diet of fruits, grains, and nuts, free from condiments and irritating or stimulating substances.

Scarlet Fever.

Scarlet fever may develop fatally in a few hours. There is usually a chill or a series of chills, vomiting, and in young children convulsions; the fever rises quickly, — in a day or two to a temperature of from 104° to 105°, remaining quite uniform for three or four days, then falling slowly, lasting altogether from seven to ten days. The glands in the

neck are enlarged and tender; the tongue is coated white, and studded with red spots, giving it a resemblance to a strawberry, hence it is called the "strawberry tongue." Swallowing is difficult and painful. There is loss of appetite, and constipation; the urine is scanty, often highly colored and containing albumin and much sediment. Inflammation of the kidneys is one of the serious complications of scarlet fever. It may occur in the mildest case, and should be guarded against during convalescence.

The rash is scarlet red; it comes out the first or second day, appearing first on the neck and breast, then spreading rapidly all over the body. The throat, tonsils, and lips are often very red. At times the throat symptoms predominate, even leading to marked ulcerations; the middle ear is frequently affected, causing deafness.

Scarlet fever is a self-limited disease and can not be cut short. Respecting the treatment of so serious a disease Professor Ratch, of Harvard, says: "In my opinion, drugs are employed to entirely too great an extent in a large proportion of the uncomplicated cases of the benign type of scarlet fever. I feel that I can speak with some authority on this point, as it has been my rule for many years to compare the results of cases treated by my colleagues with drugs, with my own cases treated without drugs."

The child should be separated from the rest of the family and no visitors allowed. Preferably, the room should be on the sunny side of the house, well ventilated, free from all fixtures and needless furniture. Absolute rest in bed is necessary. The best diet consists of fruit, fruit-juices, and light gruels. Cracked ice may be held in the mouth for sore throat and for vomiting. If possible the patient should gargle cold water or equal parts of listerine and water; cold compresses should be applied to the throat, with short applications of heat every hour. If the rash is slow in appearing, give a hot-sheet pack, or a hot foot bath. Reduce the temperature by cold sponging, or by the cold wet-sheet pack, giving cold lemonade to drink. The surface of the body should be anointed twice a day with carbolated vaseline, cocoa-butter, or olive-oil. This will soften the disintegrating epithelium, lessen its duration, and prevent the spread of the disease by means of loosened scales. The child should be kept in bed until the scaling has disappeared, which means from ten to twenty-five days. Then the house should be thoroughly fumigated by burning three pounds of sulphur to every thousand cubic feet of room space.

Diphtheria.

Diphtheria is on the increase in cities and towns, and prevails most extensively where filth abounds, in poorly lighted and ventilated houses, and among children who are not well nourished, or who from other causes are in a state of lowered vitality. The direct cause of diphtheria is a germ known as the Klebs-Löffler bacillus.

Unlike scarlet fever, diphtheria is slow in its onset. There is a feeling of restlessness and a loss of appetite; there may be nausea and vomiting; dryness and soreness of the throat on swallowing; some pain in the throat; moderate fever, as a rule not above 103°, and irregular; the pulse is rapid and weak; the bowels are constipated; the glands of the neck are swollen and tender; the muscles are stiff, and movement of the jaw is painful.

About the third day a false membrane forms on the tonsil, on the soft palate, and it may spread to the throat or into the nasal passages. This membrane is of a grayish-white color, and finally becomes

a dirty gray or a dirty yellow color. When this membrane extends into the larynx, it gives rise to what is often called membranous croup, which is attended with a mortality of about seventy-five per cent. Diphtheria lasts from ten days to two weeks, and is often characterized by extreme prostration after the third day because of the large amount of poison formed by the germs. These poisons weaken the system, and give rise to serious complications, such as acute inflammation of the kidney, paralysis, pneumonia, disease of the heart, and inflammation of the middle ear.

Isolation of the patient is of the utmost importance. If possible, there should be no communication between the sick child and other members of the family. The room should be cool, not above 68° F., well ventilated, and void of all unnecessary furniture. The dishes used by the patient should be kept in the room and thoroughly disinfected, and should be used by no one else.

The diet should be light and simple, consisting of fruits, iced fruit-juices, gruels, kumyss, buttermilk, or milk. The feeding should be regular and at stated intervals of three or four hours. Cold acid drinks, such as pineapple-juice or lemonade, are often serviceable. If the patient can not take food by the mouth, nutritive enemas become necessary.

For the first few days the child should be given a hot pack twice a day to stimulate the circulation and relieve the congestion of the mucous membranes. This treatment will also reduce the fever and eliminate the poison. A hot foot bath will answer almost the same purpose. The cold sponge every three hours is also excellent to reduce the temperature and at the same time stimulate every gland of the body. An enema should be given every day.

The local treatment should be thorough, and kept up with persistence. Ice taken frequently into the mouth tends to relieve thirst, and reduces congestion. The early and continuous application of the ice-bag, cracked ice, or the cold compress to the throat is of the greatest service. Alternate this every hour or two with fomentations for ten minutes. After the false membrane has formed, ice or cold treatment will do more harm than good, and hot applications should be substituted. If a child will not tolerate cold, apply heat, and just as hot as can be borne.

Inhalations of steam impregnated with slaked lime are good. This preparation may be kept on the stove constantly. The throat should be swabbed several times a day with a saturated solution of boracic acid in cinnamon water, or a solution containing peroxide of hydrogen one ounce, glycerin two teaspoonfuls, water one tablespoonful. If the disease extends into the nose, a nasal douche of dilute listerine one part, to four parts of water, may be used. If the glands of the neck are very painful, paint them with fifty per cent ichthyol. Hydrotherapeutic measures will lessen the possibility of paralysis during convalescence.

Measles.

The symptoms of measles are very characteristic,— chilliness, sneezing, increased nasal secretions, watering of the eyes, red eyelids; light is painful; there is some cough and expectoration; nose-bleed, pain in the head, back, and limbs; the child is feverish, drowsy, listless, fretful; the temperature rises to from 100° to 103°; the tongue is coated; at times the throat is sore; there is loss of appetite; there is nausea and vomiting; the glands in the neck are enlarged.

The eruption usually appears on the morning of the fourth day, but it often occurs on the third or the fifth day. It manifests itself in spots about the size of

a pin-head, slightly elevated, dark red, first showing itself about the temples, around the mouth and chin then spreading rapidly all over the body. In two or three days the eruption begins to fade, and comes off in small branny scales. During this process there is little if any fever. In "black measles" there is a hemorrhage into the skin and mucous membrane. This manifestation is a serious indication. Only when complicated by pneumonia or tuberculosis is measles dangerous.

This disease is also self-limiting, hence the treatment is purely symptomatic. It is practically the same as that employed for scarlet fever. If the eruption is slow in appearing, give a hot bath or a hot pack. If the eruption prematurely disappears, or "strikes in," give hot treatment. The eyes should be shaded or the windows darkened. If the cough is bad, put a cotton jacket on the chest, or a cold compress at night. For headache give a hot foot bath, and keep a cold compress to the head. Give an enema daily if necessary. When the scaling is over, fumigation and disinfection should be thoroughly carried out. Measles is more contagious during the eruptive stage, while scarlet fever is more likely to cause infection during the process of scaling.

Cerebrospinal Meningitis.

Cerebrospinal meningitis is most common during cold weather, and may occur in isolated cases or in epidemic form. Bad hygienic surroundings, exposure, overcrowding, insufficient food, foul air, impure drinking-water, excessive bodily and mental exertion, alcoholism, tobacco, — all these are predisposing causes. This disease may follow pneumonia.

The attack is ushered in with great suddenness, and usually begins between noon and midnight; it is accompanied by chills, violent headache, repeated vomiting, convulsions, moderate fever, great pain in the back of the head and in the back and limbs. Great pain is felt in pressure over the spinal column and along the spinal nerves. The second day the muscles of the back become stiff; the head is drawn back to one side; the body may be arched. The headache increases, and the patient is sensitive to light and sound, very irritable and restless; at times there is delirium, stupor, or unconsciousness, tremor and jerking of the eyeballs, some blindness or deafness, coated tongue, no appetite, and retraction of the abdomen. Often a peculiar rash appears. The duration of the disease is from a few hours to several months. In favorable cases convalescence is very protracted. The mortality is about eighty per cent in children. Those who live until the close of the second week will probably recover. Some of the unfavorable symptoms are abrupt and violent at the onset,— very high fever, convulsions, unconsciousness, great prostration, irregular respiration, persistent vomiting.

In treating this disease the room should be dark and quiet. At the very first put the patient into a full bath at from 95° to 100° and apply ice to the head and spine at the same time, or put the patient into a warm pack, with cracked ice to the head and spine. This treatment should be continuous. The ice may be placed between two towels. Along with the cold to the head and spine the patient may be given a hot mustard foot bath, or a hot leg pack, or hot bricks or sandbags may be applied to the lower extremities. This treatment will mitigate some of the violent symptoms and relieve the congestion of the brain and spinal cord. The combined treatment will prevent the depressing effect of cold alone.

The diet should be simple. When the acute symptoms have disappeared, it is then necessary to begin systematic treatment. Rigid diet is necessary, avoid-

ing meat, eggs, tea, coffee, and pastries. Electricity, hydrotherapy, massage, and attention to hygienic measures are of special value.

Whooping-Cough.

Whooping-cough has three stages,—the catarrhal, lasting about ten days; the paroxysmal, lasting from three to six weeks; the stage of decline, during which the symptoms gradually subside. It is during the first stage that the disease is most contagious.

This malady begins as an ordinary cold, with sneezing, slight fever, catarrhal discharge from the nose, watering from the eyes, a cough which gradually increases in violence, becoming paroxysmal and convulsive in character. The cough is a series of expiratory coughs, during which the face becomes flushed or blue, the expression is wild, the veins are engorged; the cough is followed by a long-drawn, whooping inspiration. At times during a paroxysm the child may vomit, or the nose may bleed, or there may even be a hemorrhage into the eyelids. The number of coughing spells in twenty-four hours varies from two or three to fifty. If the disease is prolonged, the lungs may be permanently distended, and the child becomes an easy victim to tuberculosis. Whooping-cough should not be considered a trivial thing.

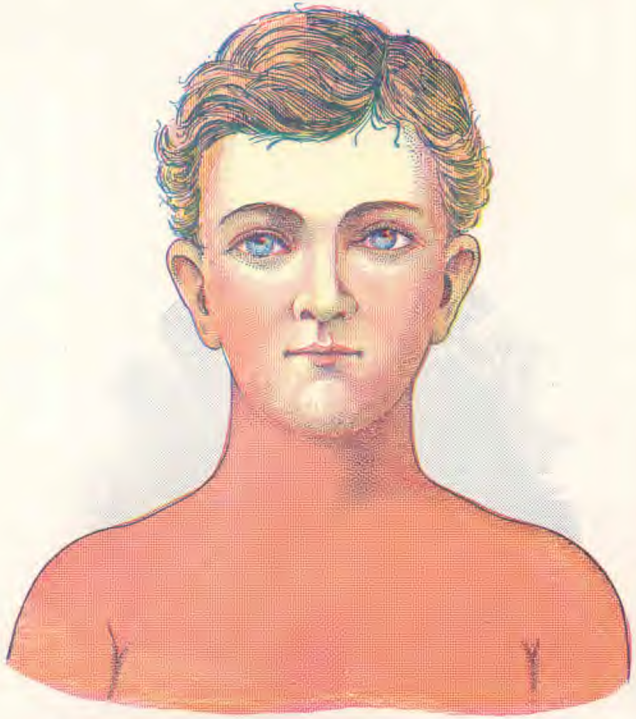
Nearly every drug in the materia medica has been used in treating this malady, but without success; in fact, with very unsatisfactory results.

Fresh air, night and day, is one of the most essential elements; sunshine is another. In the first stage the child should be put to bed and isolated from other children. The sputum should be destroyed. The child should be clothed in flannel and protected from sudden changes of temperature. The diet should be light and nutritious. Fomentations to the chest and spine should be given daily; hot packs to the lower half of the body will relieve the congested lungs. A cool sponge bath every morning, with a little salt added to the water, will be stimulating. If the child is old enough, inhalations of steam or the use of the nebulizer, containing twenty grains of menthol to the ounce of alboline, will be helpful. The mucus in the throat of a very young child may be removed quickly by means of the finger covered with a thin cotton cloth.

Croup.

There are three distinct forms of croup; namely, false croup, membranous croup, and laryngismus stridulus, or child crowing. The latter condition is purely nervous, most of the cases occurring between the ages of four and twenty-four months; it is often associated with a tendency to rickets, and quite frequently is due to a delay in cutting teeth or to indigestion. In this disease there is no fever and no hoarseness.

False croup, or spasm of the glottis, is rarely fatal, and yields readily to treatment. Membranous croup, however, is a very serious disease, and requires prompt and careful treatment. Hot flannels or fomentations are of the greatest service, and should be applied immediately. Flannels may be heated by putting them over a paper on a hot stove or around a lamp chimney. For false croup the warm bath is one of the most effectual measures; cold compresses may also be applied to the throat, alternating with hot applications. In spasm of the throat, slapping the back and dashing cold water into the face during the paroxysm may break the spasm. In membranous croup the treatment is the same as in laryngeal diphtheria.



SCARLET FEVER.

MEASLES.

UNCOOKED CEREALS AND DYSPEPSIA.

BY J. H. KELLOGG, M. D.

IT has long been known that water-brash and other dyspeptic symptoms almost universal among the Scotch Highlanders are the result of their habitual use of Scotch brose, which consists of raw oatmeal stirred up with a little hot water. It is not so generally known that the prevalence of indigestion in this country, which has given us the reputation of being a nation of dyspeptics, is due largely to the same cause; namely, the use of farinaceous or cereal foods, in an uncooked or imperfectly cooked condition.

"SEE THE SMOKING BOWL BEFORE US."—*Burns.*

The bread of the olden time consisted of thin cakes formed from a mixture of flour and water, well kneaded, baked on a tin or stove kept hot by a glowing fire. Bread prepared in this manner is ready for prompt digestion and assimilation, but our modern methods of bread-making, in which the dough is formed in large masses or loaves, or small masses under the name of biscuit, buns, or rolls, present the starchy elements in an imperfectly cooked condition, prepared to interfere with digestion, rather than to promote this most important vital process. Half-cooked mushes and porridges assist in the work of mischief, and as a result, the American people have come to be almost universally afflicted with amylaceous dyspepsia, or starch indigestion. This fact explains the extensive use of malt preparations, and the recent introduction of various starch-digesting ferments, or diastases, some being derived from malt, and others from vegetable fungi.

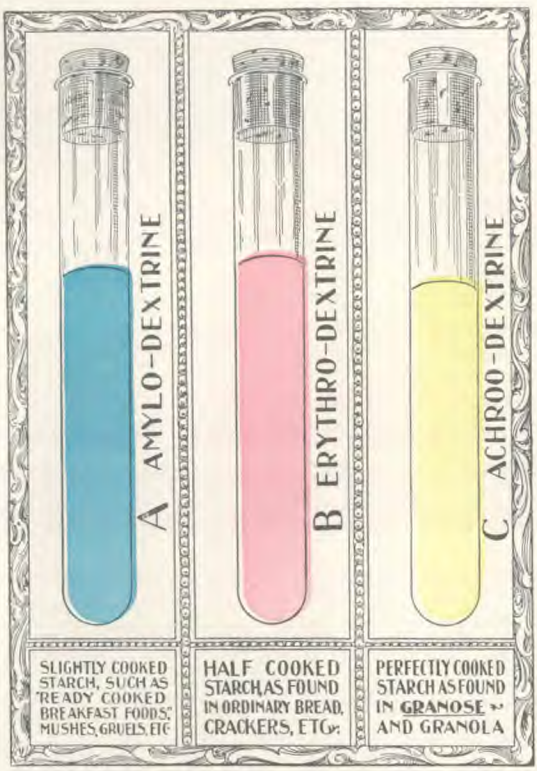
The colored illustration on the next page shows the results obtained in an interesting laboratory experiment, the purpose of which is to show the effect of thorough heat digestion in the conversion of starch.

The transformation of starch into sugar—in other words, the digestion of starch—takes place by stages. The starch is first converted into amylodextrin, or soluble starch. This is the form in which it is found in well-boiled paste and in ordinary baker's bread, in so-called ready-cooked breakfast cereals, and in mushes, gruels, vegetable soups, and similar preparations.

In the second stage the starch is further transformed into erythrodextrin, the

form in which it is found in what might be termed the half-cooked condition of ordinary well-baked baker's bread, in crackers, rolls, gems, and like foods.

The third stage is that of achroödextrin, in which the starch is found in such perfectly cooked cereal foods as zwieback, granose, and granola, and in the outer browned portion of the crust of bread.

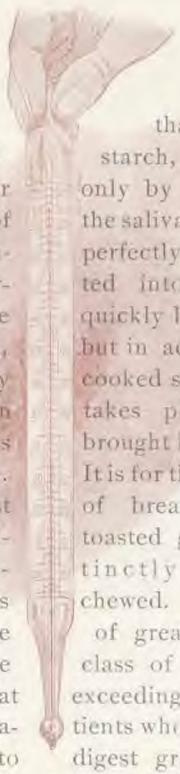


The fourth stage is maltose, or sugar, the final result of starch digestion. The digestion of starch is accomplished in nature by the action of so-called ferments, or diastases. These are found abundantly in both the animal and the vegetable kingdom,—in animals, in the saliva and other digestive fluids. In grains, the starch-digesting ferment is found just beneath the bran, ready to form sugar for the nourishment of the young plant. The starch found in green apples and other fruits is, by the process of ripening, converted first into the various ferments, or dextrins, exclusively, and finally into sugar.

This natural process of starch digestion may be artificially imitated by means of heat, the only difference in the result being that the final stage of the process by which sugar is produced is not reached. In other words, by the application of heat of sufficient degree for a sufficient length of time starch may be converted first into amylodextrin, then erythrodextrin, and then achroödextrin. Amylodextrin is produced by a temperature sufficient to cause the hydration or gelatination of starch in the formation of paste by the cooking of starch or flour. Longer cooking, or cooking for a short time at a temperature above the boiling-point of water, advances starch one step in the process of digestion to the stage of erythrodextrin. Exposure to still higher temperature for a proper length of time produces achroödextrin.

Maltose, or the last form of dextrin, is indicated by the appearance of a slightly brownish color in the digesting mass. One additional step only is necessary to convert the starch into sugar. Artificial heat is not capable of producing this step in the process, but after achroödextrin, the last stage of heat digestion, has been reached, and the perfectly cooked starch is brought in contact with the saliva or any other starch-digesting ferment, the formation of sugar takes place instantly. Raw starch, on the other hand, when

exposed to the action of the saliva, is not changed at all. Slightly cooked starch, that is, amylodextrin, or fluid starch, is converted into sugar only by the prolonged action of the saliva. Erythrodextrin, or imperfectly cooked starch, is somewhat more ted into sugar quickly by the action of the saliva, but in achroödextrin, or perfectly cooked starch, the transformation takes place just as soon as it is brought in contact with the saliva. It is for this reason that a brown crust of bread, zwieback, or well-toasted granose develops a distinctly sweetish taste when it is chewed.



These facts are of great importance to a large class of invalids, particularly to that exceedingly common class of patients who have lost the power to digest grains and other starchy foods without great difficulty. This also explains the great value of zwieback, the twice-baked bread which has been used for so many centuries at Carlsbad, Germany, in the treatment of chronic dyspepsia.

The only objection to zwieback is the difficulty experienced by many people in masticating it; persons who have imperfect or sensitive teeth find its use almost impossible, and in the case of persons suffering from dilatation of the stomach, imperfectly masticated masses of zwieback sometimes remain in that organ for a long time in an undigested state.

The full appreciation of these facts led us to undertake a series of investigations for the purpose of producing a dry cereal food still better prepared for quick digestion in stomachs crippled by disease. Granose is a cereal product prepared directly from wheat which is first thoroughly cooked, then pressed into translucent films as thin as tissue-paper, then exposed to a high temperature, whereby starch is so thoroughly dextrinized that achroödextrin, the final product of heat digestion, is present in large quantities. These crisp, toothsome flakes are easily masticated, even by toothless persons, and in an empty stomach are quickly dissolved by the digestive juices. Granose, accordingly, is well adapted to all forms of indigestion, and especially to those cases in which the inability to digest starch is conspicuous; it is also nearly a panacea for constipation, an almost constant accompaniment of indigestion.

DISORDERS OF HEARING.

BY KATE LINDSAY, M. D.

THE deaf person must of necessity have a more or less damaged brain, for those centers which are prepared to receive impressions and to send out impulses from the cells of hearing never develop, or if developed, soon become atrophied because they are not used, thus curtailing the brain structure and robbing the intellect of certain capabilities.

As the writer looks back over a professional life of more than a quarter of a century, many cases come to mind of persons who have been classed from childhood as dull, or even feeble minded, because of defective hearing. In some cases insanity has been traced to ear disorder dating from infancy, in the form of chronic inflammation, suppuration, and ulceration of the structures of the ear. The case of a boy seen some years ago, as well as some cases met with recently, are forcible object-lessons of the influence of defective hearing on the morals and intellect of both young and old. This boy, or rather young man, for he was almost grown at the time, was morose, suspicious, and cross-grained in disposition, as well as untruthful and unreliable, and a defective worker; yet his mother could remember the time before his fourth year when he seemed as bright and active as any other child of his age. An attack of measles left him with what is called by the laity a "running ear," or a chronic ulceration and inflammation of the middle ear; this continued for a number of years untreated, and unchecked in its course, at times better, again worse, until the hearing of the diseased ear was almost entirely lost, and that of the other impaired. From that time of illness the mental and moral degeneration began. As he afterward confessed, hearing but imperfectly and so not understanding the orders and instructions of parents and teachers, he was punished for inattention and blamed for incompetency, until he grew to hate all around him, and lived within himself in a state of chronic anger, growing daily more morose and morbid. No one interested himself to find out what ailed the suffering child, and so his after-life was marred, and his intellect and morals irreparably damaged. And his is but one case of thousands; in fact, such persons often suffer worse than those who are totally deaf and dumb, for they are at least understood, and some effort is made to compensate their misfortune. Special methods of teaching are invented for their benefit, while the poor victim of defective hearing is subject to the same conditions as those having sound organs, and meets with only reproach and punishment for his stupidity and want of understanding.

In Great Britain alone the actual loss of life from ear disorders is said to be more than two thousand annually, and there are twice as many deaths from this cause in the United States, making in these two nations a sum total of six thousand deaths directly due to ear diseases, to say nothing of those arising from glandular infection induced by these same aural difficulties. These latter usually result in erysipelas or some form of tubercular infection which is sure to terminate fatally, and in which the cause of death is set down to tuberculosis. Since the starting-point of all ear disease is usually catarrh either of the nasal passages or of the throat, and as most cases of ear inflammation can be avoided, it is important for parents to know how to bring up children so as to prevent infection of the middle ear.

As inflammation, no matter what form it may take, is always an evidence of infection and neglected cleanliness, so we find that inflammation of the middle ear both in infancy and adult life is most often the extension of a catarrhal inflammation due to a neglected nasal catarrh which has extended to the throat and tonsils, thence through the Eustachian tubes into the drum cavity or the middle ear.

It does not alarm the mother that the baby's nose is so filled with hardened mucus that it can not nurse properly. She regards it as a simple cold in the head, even if it is difficult for the little one to breathe through the nose. Mouth breathing and the advance of the nasal catarrhal inflammation involve the pharynx and tonsils, and then the microbes find an entrance into the Eustachian tube; in a short time one or both ears are intensely inflamed, the little one cries almost unceasingly, often has a high fever, is seriously ill, and may even be delirious, but neither the physician nor the mother, nor even the nurse discovers the cause until the drum bursts, and a discharge from the ear points to the seat of the disorder. Then there are the disordered nose, throat, and suppurating ears to treat, instead of only an infected nasal cavity, as at first. Many parents, even after this, think that so many children have running ears, and have so much faith in the very commonly accepted maxim that it "will outgrow it," that no attention is paid to the matter. On account of the discharge the child soon feels relieved of the most urgent symptoms, so many never even consult a physician from first to last, only awaking to the gravity of the case when some serious inflammation involving the bones of the head, or even invading the structures of the brain, ensues, or when they find permanent deafness resulting from the neglected running ear.

As it is easy to put out the fire of the little match the lighting of which caused a great conflagration, so the mother can by a little pains and cleanliness check the beginning inflammation by carefully cleaning from the nose the dried mucus and microbes with a spray of warm oil, followed by a cleansing spray of peroxide of hydrogen,— one part to six or eight of warm boiled or distilled water,— this being followed by the application of sterilized vaseline. A gentle rubbing of the nose for five or ten minutes twice daily will also tend to prevent venous stagnation of that member, and will keep it in a healthy condition, thus aiding in securing a healthy nasal secretion instead of the foul catarrhal discharges which act as fertile cultures for all kinds of disease-germs.

The healthy nasal secretion acts as a very powerful germicide, and never permits any germs to pass beyond the front of the nasal cavities, as has been abundantly proved by careful microscopical examinations of the secretions in both the front and back portions of the nasal cavities. In front all forms of microbes abound, while in the back part they have all disappeared. It is only when disease has changed the character of this secretion that any of these disease-producing microbes pass on and infect tissues farther back. Then the pharynx, the larynx, and the Eustachian tubes become invaded and infected, sometimes also the eyes, the frontal sinuses, and the glands of the neck.

Thus we see that it is quite as important to keep the nasal mucous surface clean and healthy as it is to shut infection out of an open wound, or to heal an ulcerated surface in any other portion of the body. Facial erysipelas usually comes from some open sore in the nose. The streptococci germs which cause this disease are found in the front portion of most people's noses, and it is these germs that give the most

trouble when they infect the tissues. Five or ten minutes spent twice daily in cleaning the baby's nose with a spray (nothing hard should be used, or the delicate membrane may be damaged) will ward off many troubles of both throat and ear.

When a child has any acute disorder, as sore throat, scarlet fever, diphtheria, measles, great care should be taken to keep not only the nose but also the throat and all the parts connected with it as clean as possible, and the surfaces whole and aseptic. Every cold renders the nose more easily infected, and in the damaged condition of the pharynx the disorder is prone to spread backward into the tubes leading to the ears, as well as downward into the bronchial tubes, causing frequent complications of bronchitis and suppurative inflammation of the ears. The normal saline solution given in the form of a nasal douche twice daily, and the spraying of nose and throat with a solution of peroxide of hydrogen are both useful in warding off ear infection in those cases. The diet should be carefully regulated. One overful or improper meal during convalescence from these blood-poison disorders may be just the one more straw that the camel could not carry, and may, by producing an attack of indigestion, cause congestion and inflammation of the throat, which may terminate in an attack of disease of the ears.

Whenever there is any chronic disorder of the throat or nose, a physician should be consulted, but at the same time the cardinal virtues of cleanliness should not be disregarded, and all other hygienic measures should be faithfully carried out. An out-of-door life so far as possible is desirable, but exposure to cold and dampness should be avoided. Daily cold bathing is perhaps one of the most efficient measures for toning up the skin, thus making it quickly responsive to any demand made upon it.

The ear is a very complex and delicate organ, and its structures are easily damaged by any rough usage. Sometimes the hearing has been impaired and even destroyed by blows, loud noises, as the firing of a cannon close at hand, diving, or by rough handling in washing and cleansing the external ears. Some parents and teachers who still believe in the old form of using the rod will in anger strike a child's ears. The too energetic scrubbing of the ears by a mother or nurse has injured the external ear and the surface of the drum membrane, thus causing impaired hearing or complete deafness. Blows from footballs, baseballs, and various other missiles may be the starting-point for deafness. Dust and dirt find their way into the ears, and by irritation cause congestion and unhealthy external ear secretions. Sometimes this hardened wax, as it is called, causes great impairment of hearing in patients advanced in life. Such should have the hardened mass removed at once by a specialist, to prevent inflammation. The reason that the ears itch is usually on account of the action of dirt and germs. In such a case, instead of using earspoons, matches, hairpins, it is much better to employ the peroxide spray, which will allay the irritation by cleansing the parts. The ears may then be dried with clean absorbent cotton in the form of a small mop.

Inflammation and suppuration of the ear may often be relieved by the hot ear douche, fomentations, or alternate hot and cold applications. The fate of Roscoe Conkling should be lesson enough to all who have chronic disorders of the ear. The cold and exposure of the great New York blizzard some years ago aggravated an old ear difficulty, and the inflammation extended to the membranes of the brain, causing his death.

The care of the ear may be summed up as follows: Protect this useful member

from germ infection by keeping all the avenues which lead to it clean, aseptic, and healthy; avoid all causes which can in any way damage the ear structures directly or indirectly; treat at once all ear disorders, and be especially watchful of the ears of children. When a child too small to talk has a fever, cries continually, and bores its head into the pillow, ear disorder may be suspected, and when pressure behind the ear makes it shrink away and cry more loudly, one may be sure that the ear aches; also when heat over the ear or a hot ear douche relieves the pain and stops its crying.

Besides the physical damage done to the ears by neglecting them in childhood and youth, there is also a functional damage caused by the many vulgar, impure, and profane words which children are forced to hear from older people, to say nothing of the vile gossip and slanderous expressions which they too often learn to enjoy. Such an education of the sense of hearing is one of the most effective ways of laying stumbling-blocks in the path of the little ones.

Many times they learn to be deaf to all that they should hear, while very wide-awake to all that they should not hear. When the truths of the Word of God come to them, they are deaf to their beauty, and do not hear with the interest and attention which leave a lasting impression on the brain cells; but when some idle tale, some impure story, is told, or some profane expression is used in their hearing, they are all attention and animation. They go away with the words and ideas impressed on their minds, and fixed so clearly that they are ready to repeat them again and again to others. The education of a developing mind is a great and solemn work, and should include the channels by which this education reaches the inner intelligence of the little ones. Ears to hear only the truth, eyes to see only the good, sensation which responds only to the stimulus of what is good and true, and learns how to choose the good and to reject the evil, mean soundness of the physical structures of the sensory organs, and the proper education and direction of their functions.

THINK ON THESE THINGS.

John Ruskin called tobacco "the most natural curse of modern civilization."

Nicotine causes death, according to Stillé, more quickly than any other poison, except prussic acid.

Leeches are instantly killed by the blood of smokers, according to the testimony of a physician in St. Giles.

The pulse of every habitual user of tobacco, declares Dr. W. H. Riley, will show irregularities in the heart's action.

Snuff is allowed to sisters of charity in France, as it renders the nose insensible to the bad smells of slums and hospitals.

"**Whether the cigarette causes imbecility,** or whether a congenital condition of imbecility leads the individual to the use of the cigarette, I do not know," confesses Dr. William E. Quine, of the Chicago College of Physicians and Surgeons. He adds: "So far as I am willing to express myself on this subject, I say sincerely that the cigarette and imbecility are related in some way."

Horace Greeley once said, "Show me a drunkard who does not use tobacco, and I will show you a white blackbird."

Smoking in the evening produces wakefulness, as the nicotine acts as a cerebral irritant, and interferes with the vasomotor centers.

Many an infant, says Dr. Trall, has been killed outright in its cradle by the tobacco smoke with which a thoughtless father filled the room.

A squadron of hussars hid tobacco in their breasts for smuggling purposes. Every man of them was seized with headache, vertigo, and vomiting.

The daughter of a tobacco merchant, from simply sleeping in a chamber where a large quantity of tobacco had been rasped, died soon after, in convulsions.

One of the worst cases of neuralgia he ever saw, claims Dr. Brodie, president of the Royal Society, was caused by tobacco using, and ceased with the habit.

He could indicate the boy who used tobacco, said Professor Oliver, of the Annapolis Academy, by his absolute inability to draw a clean, straight line.

Put a tobacco victim into a hot bath, says Meta Lander, and let him remain there until he perspires freely; then drop a fly into the water, and instant death will ensue.

Tobacco injures the voice, and the best singers abstain from using it before a public appearance, and sometimes for several weeks before some special effort.

The use of tobacco by the young, says Dr. Brewer, is productive of mental and moral deterioration, while in older persons the weed causes brain disease and insanity.

No evils are so manifestly visited upon the third and fourth generations, according to Sir Benjamin Brodie, as the evils which spring from the use of tobacco.

Confusion in the head, vertigo, stupor, faintness, nausea, vomiting, general depression of the nervous and circulatory functions, follow the ingestion of large quantities of tobacco.

Eyesight is frequently impaired by the use of tobacco, due to the paralyzing of the nerves controlling the iris, or paralysis of the optic nerve, sometimes resulting in absolute loss of sight.

Queen Victoria objects to tobacco smoke, if an English paper is to be believed. It is said that on one occasion when the Prince of Wales was a minor, she noticed the smell of the weed upon his person, and gave orders that he should be confined to his rooms for a month, the order being vigorously carried out.

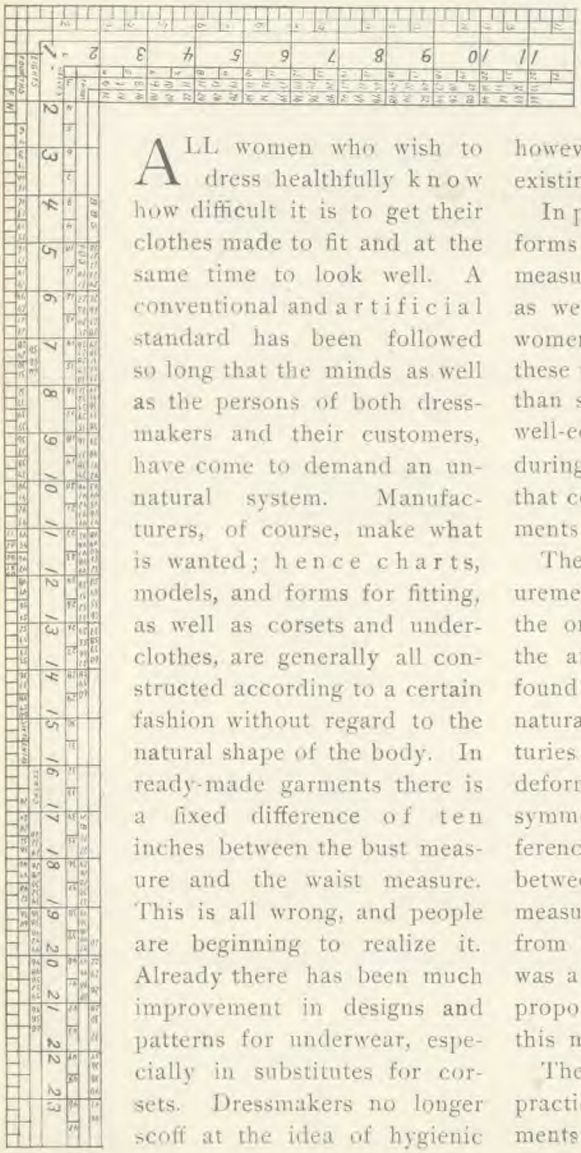
"Watch a cigarette smoker," suggests Dr. E. M. Hale, emeritus professor of materia medica and therapeutics at the Chicago Homeopathic Medical College, and a specialist in diseases of the heart. "He first draws in all he can of the smoke, then in exhaling he forces it through the nose. How much mucous surface is bathed by the smoke? — Over one thousand square feet. It first passes through the larnyx into the bronchial tubes, then into the bronchioles, or small bronchi, into the air cells — about 725,000,000 of them. All this surface, especially the air cells, absorbs the nicotine from the smoke, and it is carried into the blood, where it is distributed to the brain and the heart. Now, nicotine paralyzes muscular fiber, and the heart is especially affected, because it receives and distributes all the blood in the body."

BUT peaceful was the night
Wherein the Prince of Light
His reign of peace upon the earth began:
The minds, with wonder whist,
Smoothly the waters kissed,
Whispering new joys to the wild ocean,
Who now hath quite forgot to rave,
While birds of calm sit brooding in the charmèd wave.

—*Milton*

A NEW METHOD OF FITTING WAISTS.

BY ANNE E. TABOR.



ALL women who wish to dress healthfully know how difficult it is to get their clothes made to fit and at the same time to look well. A conventional and artificial standard has been followed so long that the minds as well as the persons of both dressmakers and their customers, have come to demand an unnatural system. Manufacturers, of course, make what is wanted; hence charts, models, and forms for fitting, as well as corsets and underclothes, are generally all constructed according to a certain fashion without regard to the natural shape of the body. In ready-made garments there is a fixed difference of ten inches between the bust measure and the waist measure. This is all wrong, and people are beginning to realize it. Already there has been much improvement in designs and patterns for underwear, especially in substitutes for corsets. Dressmakers no longer scoff at the idea of hygienic dress, and many conscientiously endeavor to make garments that are not only stylish, but at the same time comfortable. This, however, is very difficult to do under existing conditions.

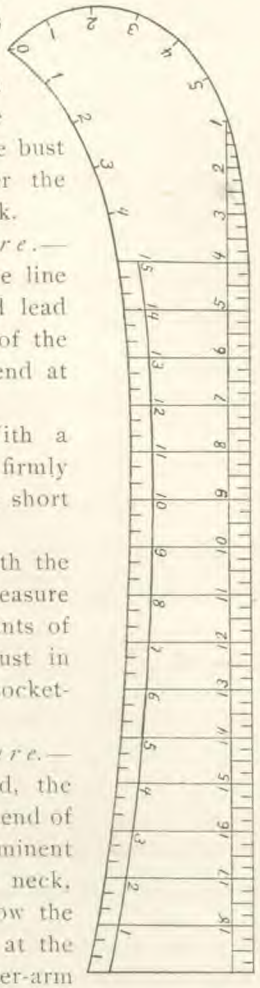
In preparing the system of fitting which forms the subject of this article, careful measurements were taken of five hundred as well-developed and perfectly formed women as could be found. Each of these women had previously had not less than six months' scientific training in a well-equipped gymnasium, and of course during that time had worn no garment that could in the least restrict her movements.

The average obtained from these measurements was then compared with both the ordinary conventional standard and the artistic or Grecian model. It was found to be different from either,—a natural result, since we know that centuries of abuse have weakened and really deformed the body. In the perfectly symmetrical natural figure there is a difference of five inches—instead of ten—between the bust measure and the waist measure. In the average figure resulting from this series of measurements there was a difference of eight inches. Other proportions of the waist correspond to this measurement.

The dress square and rule form the practical embodiment of these measurements. They are so arranged and mathe-

matically adjusted that garments may be cut by them to fit any figure, from that of the infant twenty inches in circumference to the woman whose waist measures sixty inches.

Measurements of the body should be taken as follows: —



1. *Bust Measure.*— With a full inspiration, measure over the fullest point of the bust in front and directly over the shoulder-blades in the back.

2. *Under-Arm Measure.*— Place the end of the tape line closely in the armpit, and lead down to the division line of the body, or to the natural bend at the short ribs.

3. *Waist Measure.*— With a full inspiration, measure firmly at the natural bend at the short ribs.

4. *Chest Measure.*— With the lungs fully expanded, measure firmly over the chest, points of indentation being found just in front of the ball-and-socket-joint of the shoulder.

5. *Hip-to-Neck Measure.*— With the body well poised, the lungs expanded, place the end of the tape line on the prominent bone at the back of the neck, letting the tape line follow the circle of the chest, ending at the same point as the under-arm measure.

6. *Neck Measure.*— Place the tape line firmly around the neck at its lower rotation.

7. *Length of Shoulder.*— Find the small indentation at the back of the upper shoulder on the border of the ball-and-socket-joint, and follow the cords to the collar-bone.

8. *Width of Back.*— With the lungs expanded, find the small indentation at the ball-and-socket-joint in the back, and take firm measure.

9. *Length of Back.*— Measure from the prominent bone of the back of the neck to the natural bend of the back at the division line of the body.

10. *Arm's-eye Measure.*— Measure firmly around the arm's-eye close to the body.

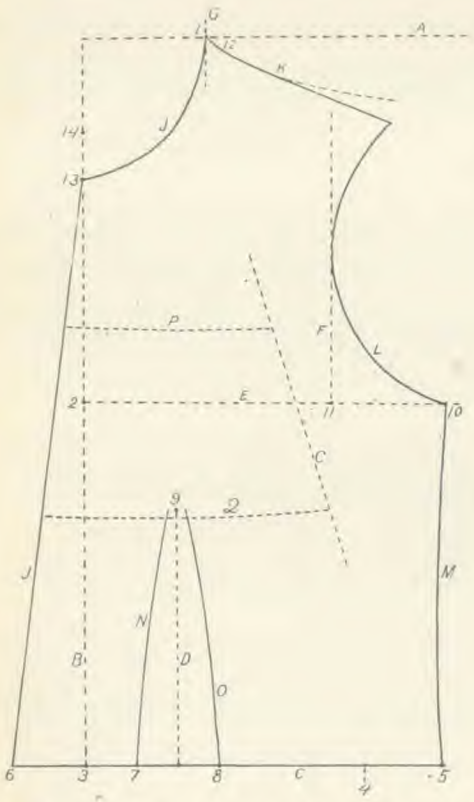
11. *Length of Sleeve.*— Find the indentation in the upper chest measure, and measure downward to the end of the arm bone at the wrist.

12. *Elbow.*— Place the tape line around the arm at the elbow; fold the arm, and take firm measure.

13. *Hand Measure.*— Place the tape line around the widest part of the open hand and over the thumb, so as to determine the size of the hand for adjusting the sleeve.

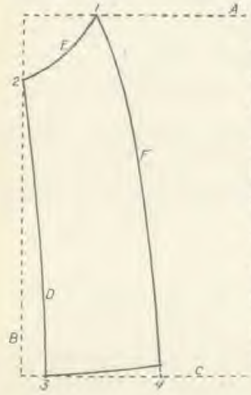
The square is scaled proportionately from twenty to sixty inches, and the principal outline of any pattern is cut by it, the curved rule providing for the necessary individual adjustment. For instance: in the accompanying diagrams the dotted lines are drawn from the square, while the solid lines show the modifications introduced by the rule. The reader will notice that the rule has both a concave and a convex curve. This is necessary because the body has both curves. The front of the waist offers the greatest convexity, the back the greatest concavity.

Conventional waists always, and hygienic generally, have an ungraceful appearance, due to the fact that the natural curves of the body are not followed in



cutting. The former undertake to introduce artificial curves; the latter too often pay no attention to them. But the natural body has beautiful curves, and this system of cutting is designed to express them.

It was found that in order to fit the natural form, the waist should be about two inches wider in front than in the back, and should form nearly a half-circular line down the front. In order, then, not to have a square-looking figure, the square and rule are so arranged that the difference between the concave line of the back and the convex line of the front is added to the front, making a perfectly fitting garment that preserves the natural lines of the form.



The body has naturally strong points for seams, and if these are properly located, there is no need of whale-bones or other uncomfortable stays.

By studying the body anatomically and making it a matter of conscience to fit the form and not an arbitrary standard, it is possible to make dresses that are at the same time graceful, comfortable, and hygienic.

THE equilibrium between brain and hand work must be maintained, or the individual will suffer. If he is wholly occupied with brain work, the hand will suffer; if he is wholly occupied with hand work, his mind is dwarfed.—*Frances E. Willard.*

SUGGESTIONS FOR WINTER HOUSEKEEPING.

BY MRS. E. E. KELLOGG.

THE sanitary condition of a house in winter involves special thought and care, since with the advent of cold weather the doors and windows are closed, largely shutting out the purifying influence of the fresh air which has so freely circulated through the house during the warmer season.

While for the purpose of warmth this enclosing of the dwelling is made necessary, it is imperative that the housekeeper make sure of some plan of ventilation whereby a sufficient amount of the life-giving oxygen shall be admitted to every occupied room, both day and night, to keep the indoor atmosphere pure and healthful.

Air contamination is, however, occasioned not alone by lack of ventilation, but also by lack of care in removing the germ-laden dust particles which find their way into every nook and corner. Dust demands careful attention at all seasons, since frequently it is the vehicle by which disease enters the home; but in winter, when the tendency is to spend most of the time indoors, occupying as small a portion of the house as possible, to economize heat, the importance of cleanliness from dust becomes greatly increased. A dampened cloth should be used to wipe it from its every lodging-place; and if the house be heated by a hot-air furnace, this dusting should include the register and pipes as far as can be reached. The open register is likely to become the depository of the mud and filth brought in upon the footwear and clothing of those who hover over it. If allowed to remain, this dust soon becomes dry, and is wafted by the current of warm air back into the room to be breathed by the inmates.

Various gases and vapors, the product of the household heating, lighting, and cooking, are another source of indoor-air contamination, which, if not removed by proper ventilation, permeate the house, condensing upon all surfaces, carrying the dust in the air along with them, and fastening it securely to whatever they come in contact with. This forms the "soil," visible or invisible, upon articles and fabrics that gives to the house and the clothing of its inmates a characteristic odor.

To secure that freshness and sweetness which should be an attribute of every dwelling, requires not only good ventilation, but an abundance of sunlight in every room. Strong sunlight, nature's own purifier, destroys the disease-germs to which it has access. Every occupied room, the bedrooms, and the closets should be opened to the air and sun each day. Rooms not in constant use should be given frequent sun baths. Beds in unoccupied rooms, not heated, are better not made up in winter, as the compact mass of bedding catches and retains the dampness, and when used, unless carefully aired and dried beforehand, becomes a menace to the life and health of the occupant. To give a look of order to the room, cover the mattress with the spread, leaving off the blankets to be subjected to at least a weekly exposure to the sun to keep them in condition for use when needed.

No parts of the house need more careful watching during the winter than the kitchen and the cellar. For sanitary reasons food cellars ought never to be built under dwelling-houses; but if such exist, they should not be permitted to become a source of danger to health. Light and ventilation are quite as essential to the healthfulness of a cellar as to other rooms

of a dwelling. Once a day, at least, during the cold season, the windows should be opened wide for a few moments, to effect a complete interchange of air. All mold and mustiness should be carefully kept out by ventilation, cleaning, whitewashing, and fumigation with sulphur or formaldehyde; vegetables and other decomposable articles should be frequently sorted, and all decaying substances promptly removed. This is of the utmost importance, since the germs and foul gases arising from decomposing foodstuffs form a deadly source of contamination to the air of the living-rooms, to which they ascend through every crack and crevice. In the kitchen every cupboard and closet should receive a thorough airing several times daily. It is a misfortune to have an enclosed sink, for it is likely to become the repository of damp scrubbing-cloths, brushes, and pails, which foster mold and other micro-organisms. That ordinary article of furniture, the woodbox, is in many kitchens a veritable germ breeder. As is often the case in winter, it is the receptacle for sweepings, various bits of garbage, and other odds and ends, besides the fuel, which, being often wet or damp, adds moisture to the miscellaneous contents, thus affording, with the warmth from the fire, the best possible conditions for the rapid growth of a bountiful crop of bacteria to poison the air and cultivate disease.

WINTER FOODS.

BY EVELENE HELMAN, M. D.

AS each successive season advances, the bountiful hand of nature furnishes us with just the articles of diet which are best adapted to our use. As the heat of summer merges into the cold of winter weather, we no longer find upon the market an abundant supply of fresh juicy fruits and succulent vegetables, but instead a variety of more substantial foods, which may be laid aside, and kept for a considerable length of time; as, apples, squashes, beans, peas, nuts. This is a wise provision on the part of nature.

In warm weather we do not need to make any effort to keep warm, but on the contrary, our chief aim is to keep cool. We wear light, loose clothing to allow free radiation of heat from the body. The pores of the skin are freely opened and the perspiration stands, visible as a rule, on the entire surface of the body; the air passing over the moist surface cools the body by evaporation. We drink large quantities of water to reduce the temperature of the blood, bathe the tissues, increase the activity of the skin and kidneys, and keep the body as free from waste material as possible. We crave fruits because of the refreshing acids contained in them, and because they are also an excellent means of introducing fluid into the system. Fresh succulent vegetables are also relished during this season. These, with grains and nuts, meet all the demands of the body, and constitute an ideal diet for summer weather.

In winter the conditions are quite different. Greater demands are made upon the system. It must manufacture more heat in order to maintain the normal temperature. There is a call for a greater deposit of fatty tissue, as this is a poor conductor of heat and cold, and thus protects against the cold from without and also aids in retaining the body heat. This requires foods which furnish

the elements that produce heat, force, and energy, and supply the fatty tissue. Such elements are starches, sugars, and fats. These are found principally in grains, legumes, and nuts, and also, but in smaller quantities, in fruits and vegetables, as in the grape, the fig, the banana, and the potato. Since the process of cooking has an action upon these foods similar to that of the digestive fluids, all foods containing much starch or having tough skins should be most thoroughly cooked in order to save energy. The mention of grains usually conveys the idea of mushes, but as a matter of fact, grains are more frequently taken in the form of breads, which is the better form. Such dry, crisp, well-baked breads as zwieback, rolls, crackers, are best. Taken in this form, the starch is already changed to dextrin, a kind of sugar which is more readily digested and assimilated than starch.

The old idea that we must have flesh-foods in order to "keep up our strength" is not well founded. True, meat does contain fibrin, an element useful in repairing wasted tissues, but we have the same element in another form in grains and legumes. Let us compare, for instance, the food value of lean beef with that of the common bean. The total nutritive value of beef is twenty-eight per cent, of which about twenty per cent is fibrin, and the remainder fats, salts, etc. The total nutritive value of beans is about eighty-five per cent, at least twenty-five per cent of which is vegetable casein, or legumin, the element corresponding to the fibrin of meat, and from fifty to fifty-five per cent starch, the remainder being fats, salts, etc. From this it is patent that the value of beans as a food is three times that of lean meat. Meat contains practically no material for the production of heat and force. The feeling of strength which is often experienced by those who partake largely of meat is due to the stimulating effect of the impurities contained in flesh-meats. The fats found in flesh-foods and butter may be obtained in a much purer state in nuts and legumes. Pork contains about fifty per cent of fat; other meats contain less. Nuts average about fifty per cent. Beans or peas in some form should be a daily item on the bill of fare. We may have different varieties and serve each in different ways,— as soup, vegetable roast, baked, stewed, succotash, etc.

That we must have some stimulant to keep up the strength and fortify the system against cold is a mistaken idea. Alcohol excites the heart and dilates the small blood-vessels of the skin, thus causing a larger quantity of blood to flow to the surface. At the same time the nerves are paralyzed so that there is a false sensation of warmth, for it has been demonstrated that the actual body temperature of the alcoholic is below the normal.

Tea and coffee also are stimulants, and do not impart strength to the body. The habit of taking a cup of hot tea or coffee to "warm up" may afford temporary relief, but certainly decreases the ability of the body to resist cold. Pure water is a most powerful remedial agent, and by its use the desired end may be attained without leaving behind any deleterious effects.

The following simple recipes may prove suggestive, and may be prepared conveniently in any home:—

Baked Beans.—Soak three cupfuls of beans, and boil until tender, add salt, with water to cover them several inches, and one cup of strained tomato. Bake four or five hours.

Savory Peas.—Mix thoroughly two cups of pease pulp, two cups of dried bread-crumbs, one cup of strained tomato, and one-half cup of thin cream or one tablespoonful of nut butter. Season with salt and chopped celery, onion, or sage; bake

forty minutes or until quite dry and nicely browned.

Lima Bean Soup.—Simmer one pint of Lima beans until very tender. Rub them through a colander, and add rich milk or water until of about the consistency of thick cream. Salt to taste. Boil two or three minutes and serve.

Seasonable Bills of Fare

Breakfast No. 1.

Fresh Fruit
Nuttola with Fruit-Juice
Wafer Tomato Toast
Corn-Mush Rolls Baked Sweet Apples
Browned Granose Biscuit
Caramel-Cereal with Malted Nuts

Holiday Dinner No. 1.

Lentil and Chestnut Soup
Rice and Nut Croquettes
Browned Sweet Potato
Canned Peas or Asparagus
Wafers with Stuffed Apple
Raisin Bread Zwieback
Browned Granose Biscuit
Crystal Wheat Cranberry Sauce
Oranges Malaga Grapes
Fruit-Coco

Breakfast No. 2.

Fresh Fruit
Browned Wheat with Cream or
Nut Cream
Broiled Protose with Gravy (see Sept. No.)
Baked Potato Graham Bread
Hoe-Cake

Holiday Dinner No. 2.

Canned Tomato and Okra Soup
with Sticks
Stuffed Potato (see Sept. No.)
Vegetable Roast
Stewed or Canned Corn
Potato and Beet Salad Granose Flakes
Walnut Buns Beaten Biscuit
Apricot Pudding
Almond Sauce Cranberry Jelly
Mixed Nuts Stewed Fruit
Caramel-Cereal

BY MRS. E. E. KELLOGG

RECIPES.

Nuttola with Fruit-Juice.— Nuttola, being already a cooked food, may be served dry with any preferred fruit-juice, or the juice may be heated just to boiling and an equal quantity of nuttola introduced. Allow it to boil up once, and serve hot. Unsweetened grape-juice used thus with nuttola makes an excellent breakfast dish. The pulp of stewed sour apples is likewise very good.

Wafer Tomato Toast.— Brown whole-wheat wafers well on both sides over a gas-jet or glowing coals. Soften by putting into hot cream or nut cream for a few moments. Place in layers in a deep dish, pouring over each layer a little tomato sauce prepared as follows: Heat a quart of strained stewed tomato to boiling, thicken with two tablespoonfuls of corn-starch or flour rubbed smooth in a little cold water. Season with salt and a half cupful of cream or nut cream. If preferred, celery-salt may be used instead of salt.

Corn-Mush Rolls.— Make a dough of one cup of well-cooked corn-meal mush, one-half cup of cocoanut cream, and two and one-half cups of white flour. Knead thoroughly. Shape into rolls and bake.

Caramel-Cereal with Malted Nuts.— For persons wishing to avoid the use of cream and sugar in this beverage, a little malted nuts, added after steeping the cereal, is an admirable substitute.

Lentil and Chestnut Soup.— Use the large Italian chestnuts. Blanch by boiling for five minutes in the shell, then dropping into cold water, and peeling. Cook one pint of the blanched nuts in boiling water until tender and mealy, then press through a fine colander or sieve. To each cup of chestnuts thus prepared, add two cups of lentils measured after having been cooked and pressed through a sieve, two tablespoonfuls of onion-juice, one cupful of rather thick nuttolene cream (other nut cream or dairy cream may be used), two tablespoonfuls of chopped parsley, salt to season, and sufficient water to make of the desired consistency. Celery-salt may be used if preferred.

Stuffed Apples.— Remove the cores from well-shaped, sound, sour apples. Fill the cavity with a mixture of equal parts of rather moist bread-crumbs and nuttolene, with a seasoning of minced celery; bake until the apples are tender. Sage or other herb seasoning may be substituted for celery if preferred.

Canned Tomato and Okra Soup.— Rub canned tomato and okra through a colander, heat to boiling, season with salt and cream or nut cream, and serve. If preferred, one or two cooked potatoes may be rubbed through a colander and added.

Vegetable Roast.— One cup of strained stewed tomato, one cup of cooked lentils (measured after being rubbed through a colander), one cup of cooked crystal wheat, one tablespoonful of nut butter, one-half teaspoonful of finely powdered and sifted sage, or one tablespoonful of finely minced celery. Add a little salt for seasoning, turn into a baking dish, and bake in the oven until quite dry. Serve in slices with a gravy made by cooking together for a few moments two cups of lentils prepared as for Lentil and Chestnut Soup, one cup of strained stewed tomato, salt to season, and a tablespoonful of nut butter.

Potato and Beet Salad (D. D. Fitch).— Chop equal quantities of protose and potatoes with one half the quantity of hard-boiled egg yolks and cold boiled beets; add lemon-juice and minced parsley to taste.

Walnut Buns.— Prepare the buns after any preferred recipe, and when ready to shape, knead lightly into the dough some halves of walnut meats. When the buns are baked, brush lightly with syrup of pure sugar, and place walnut meats on the top in any desired manner.

Apricot Pudding.— Moisten slices of zwieback in hot malted nuts, cream, or nut cream, and place on the bottom of a pudding dish. Cover with a thick layer of apricot marmalade prepared by stewing dried apricots until tender, rubbing through a colander, sweetening to taste, and evaporating until rather firm. Add another layer of the moistened zwieback, and cover again with the fruit. Fill the dish with alternate layers, finishing with the zwieback. Bake in a hot oven, and serve hot or cold, with almond sauce.

Almond Sauce.— Mingle one-fourth cup of almond butter with one cup of water, adding the water slowly, till of the smoothness of cream. Heat to boiling, add a tablespoonful of sugar, and thicken with a level tablespoonful of corn-starch rubbed smooth in a little cold water.

About Tea.

Travelers in China, it is said, seeing how tea is made there, declare they will never drink China tea again, that one might as well expect good, clean bread to be made in a Chinese opium den as to find clean tea made by the Chinese in their filthy huts by their filthy methods.

It is not reassuring to learn that among this people each family has its own tea plat and makes up the product which is sold to dealers, who find it necessary to use coloring matter to give the various batches a uniform color and make it fit for a foreign market. Again, the Chinese, being a frugal people, wasting nothing, after steeping leaves for their own use, dry and color the grounds for the American market, for no colored green teas are admitted to the European markets, and but little pure green tea is used there. The Chinese themselves never use colored teas, and it is stated by the best authority that seven eighths of all the tea exported from China is colored and made in Japan, for if there is no colored Japan tea, why the frequent use of the word "uncolored" by dealers and users when speaking of Japan tea? No one ever heard of uncolored Indian or Ceylon tea.

All the colored and adulterated teas come to the United States. A newspaper writer, commenting on this fact, says, "It is singular that the proud and boastful American people, who exclude the Chinaman himself, will buy and drink his filthy, adulterated tea grounds. The United States is the dumping-ground of the world, not only for the paupers and degraded humanity of every nation, but for refuse food and drink that no other nation will receive."

More than sixty substances are used by the Chinese in coloring and weighting tea, such as subacetate of copper, indigo, and turmeric, mixed together to make a bright vegetable green; sulphate of lime or gypsum, to give the tea a grayish, smooth, glossy appearance; glucose of gum arabic water, to make the gypsum adhere to the tea; Prussian blue, Dutch pink, soapstone, graphite, rice-starch.

Most people are alarmed by facts like these, while scarcely lifting an eyebrow at the graver truth about the genuine, unadulterated article. That tea contains two harmful substances, one of which is a deadly poison; that its continued or excessive use is a potent cause of nervousness, irritability, dyspepsia, insomnia; that tea drinking even leads to the use of tobacco and alcohol, — these are facts far more alarming than those concerning ordinary adulterations.

A Story of Sheepskin.

A sick Canadian once visited a sanitarium for treatment. The physician in charge thought from his appearance that he must be a very large man; but when he came to remove his clothing for examination, the truth appeared. The man took off first an overcoat, then a jacket, then a coat, then a vest, then another vest, then two or three suits of very thick underclothing, then under that a woolen sheet wound around his body, then a woolen blanket folded in several thicknesses, and, last of all, — perhaps you will think it is not true, but it is true, — he actually stood forth robed in a sheepskin, with the wool on, and the wool turned inside, next his body. This man from a cold country had clothed himself a little warmer and a little warmer, until finally he had accumulated all that clothing; yet he still suffered from the cold, and the only way he could keep warm was to sit in a bath-tub filled with warm water up to his neck. He could not keep warm at night with ordinary bed clothing, so he had a tin can shaped to suit his body,

and filled with hot water, and on this he lay every night.

The physician gave him a lecture about wearing so much clothing, but his admonitions fell upon deaf ears. The man was placed in charge of a nurse who was instructed to get away all of his clothing that he could, and especially to capture that sheepskin. The nurse succeeded completely so far as the blanket and sheet were concerned, but the sheepskin long resisted. One day, however, the nurse came running down stairs to the doctor's office, his face beaming with smiles, and exclaiming as he entered the room, "Doctor, I've got his pelt off at last! I've got his pelt off at last!" So finally the poor man really began to live again. He had been literally smothered with clothing; and it took months of training to get his skin into such a condition that it would react to the application of cold water, but eventually he made a fairly good recovery.

THE secrets of happiness and longevity, in my judgment, are to cherish and cultivate cheerful, hopeful, and buoyant spirits. If you haven't them, create them.—*Chauncey M. Depew.*

THE SANITARIUM IDEA.

TWENTY-FIVE years ago Dr. S. Weir Mitchell, one of the leading physicians of the United States, and a man of world-wide fame, in a paper read before the American Medical Association, remarked that one of the great needs of the times was homes for invalids; institutions in which sick people could be received and supplied with all the comforts, and, if need be, luxuries, of a home, while at the same time receiving the benefit of the most skilled medical attention and treatment.

About that very time the Battle Creek Sanitarium, then known as the Health Reform Institute, was undergoing a transformation from a very excellent and well-conducted water-cure to a thoroughly scientific medical establishment provided with all the known appliances for the rational treatment of disease, and conducted in harmony with scientific principles.

This was the beginning of the sanitarium idea as representing a thoroughly scientific and rational medical establishment. When the word "sanitarium" was first adopted for the Battle Creek institution, in 1876, it was practically unknown. The word "sanatorium" had been employed in England to designate a health resort for invalid soldiers. It referred especially to small premises or small hospitals established near the seashore; but these institutions were not different from ordinary hospitals, except in the fact that they were especially located with reference to climatic advantages. The word "sanitarium" was not to be found in the dictionaries of the day; it was practically unknown, and the idea it represented was as little known and understood. But the principles of dealing with the sick, for which this idea stands, have steadily gained headway in the world, until at the present time they are rapidly obtaining recognition everywhere.

The sanitarium is really the outgrowth of the development in modern times of some of the notions that formerly prevailed about disease. Disease is no longer regarded as an entity, but as a morbid condition of the body, an abnormal perverted vital action, an action of the system to recover its normal state. The

thing to be done is not to fight the disease, but to aid the patient in his efforts to establish normal conditions. Health is the antipode of disease, and health training is the normal antidote for diseased action. The sick man must be trained out of disease into health, and the sanitarium is the place where all possible facilities and appliances are afforded for the accomplishment of this purpose.

THE BATTLE CREEK (MICH.) SANITARIUM.

The patient who visits the sanitarium leaves behind him his home cares and, so far as possible, the causes which have operated to make him sick. He is supplied with the most easily digested foods, exactly suited to his needs, calculated not only to tempt the most fastidious taste, but also regulated to his requirements by the most accurate adjustment permitted by a thorough application of the principles of scientific dietetics. A careful physical examination indicates the exact amount and kind of exercise to be taken, while a thoroughly equipped gymnasium and swimming-bath provide the means needed for any required exercises. In a thoroughly equipped bath-room will be found apparatus for the application in every possible form of that miracle-working remedy,— water, hot and cold, and of all intermediate temperatures. Electrical batteries, machines, and all needful accessories afford facilities for the use of this important agent in every possible form. Thus the sick man is not only supplied with the conditions necessary to the development of health, but by the aid of the most powerful curative agents he is day by day lifted along the road toward recovery.

One of the special advantages afforded by sanitarium treatment is to be found in

THE ST. HELENA SANITARIUM.

the fact that patients are not only cured of their existing ills, but are instructed how to avoid like suffering in the future by a close adherence to the hygienic rules of life.

The Battle Creek Sanitarium has for the last fifteen years been the prolific mother of a family of trained physicians and nurses, and the assistance it has freely given in financial and other ways to many young men and women desiring to devote their lives to the principles of dietetic, sanitary, and medical reform and rational medicine, especially along missionary lines, has resulted in the development of an army of well-trained nurses and physicians now numbering more than half a thousand, and increasing at the rate of from one hundred and fifty to two hundred a year. These physicians and nurses have been sent out into various

THE NEBRASKA SANITARIUM.

parts of the world to establish centers from which the light of hygienic reform in dress, diet, etc., may emanate. Each one of these centers stands for all that pertains to the reform of individual habits in relation to health, including strict total abstinence, opposition to the use of tobacco, tea, coffee, and all other narcotics.

CHICAGO BRANCH.

Large institutions have already been erected in other localities, and are well patronized. The chief of these are located at St. Helena, Cal.; Claremont, near Cape Town, So. Africa; Basle, Switzerland; Boulder, Colo.; Lincoln, Neb.; Guadalajara, Mexico; Copenhagen, Denmark; So. Lancaster, Mass.; Chicago, Ill. Small institutions have been and are successfully conducted at Portland, Ore.; Sydney, N. S. W., Australia; Apia, Samoa; Honolulu, H. I.; Calcutta, India; London, England; Christiania, Norway; Des

Moines, Iowa; Nashville, Tenn.; Cleveland, Ohio; and a start has been made in a number of other places; as, Toledo, Ohio; Rome, Ga.; San Francisco, Cal.; Christchurch, New Zealand, and several others.

As the circulation of GOOD HEALTH extends to all parts of the English-speaking world, and as this magazine numbers among its subscribers a large proportion of people who travel extensively and are likely to find themselves in need of sanitarium treatment in some of the distant lands mentioned, it will not be inappropriate to devote a few pages to the description of the leading institutions mentioned. In the business columns of the journal may be found the post-office address of each of the establishments named.

The Battle Creek Sanitarium, the oldest of the large sisterhood of Sanitariums which are scattered all over the world, is located at Battle Creek, Mich., a city noted for its beauty and large manufacturing industries. The city is easy of access, being midway between Detroit and Chicago, on the main lines of the Grand Trunk, Michigan Central, and Cincinnati Northern railroads.

The institution stands on a beautiful elevation of ground in the western part of the city, and is easily accessible from all the stations.

It has justly gained a world-wide reputation, being the largest and best-equipped establishment of its kind in America. Especially here is the "sanitarium idea" fully and successfully carried out.

A little more than thirty years ago the institution consisted of a small wooden building capable of accommodating less than a score of patients; to-day it requires a main building 350 feet long, five and six stories high, a hospital with one hundred beds, a workers' home which is occupied by three hundred women nurses, and thirty cottages, each of which is capable of accommodating almost as many as, and in come cases more patients than, the original Sanitarium building. The patronage of the institution has steadily increased, and during the present year has been greater than ever before, being at one time more than six hundred.

THE COLORADO SANITARIUM.

THE GUADALAJARA SANITARIUM.

Two and one-half miles to the south of the Sanitarium is Lake Goguac, where the institution has a large villa open to the guests of the Sanitarium during the summer months. This beautiful lake-side resort is reached by means of an electric railroad. The grounds are spacious and well shaded, and the lake affords abundant opportunities for rowing, sailing, and steamboat riding.

The St. Helena Sanitarium, located at St. Helena, Cal., was started in 1878, in a small building capable of accommodating eighteen or twenty patients. This institution has increased in size until at the present time the main building will accommodate more than one hundred patients, and in addition to this, several fine cottages have been erected.

THE SKODSBORG SANITARIUM.

The site of the institution is a most beautiful one, being located on the side of a mountain at the head of a lovely valley, commanding a most sightly prospect. The grounds around it are laid out in most artistic and beautiful designs, the whole mountainside being threaded with graded walks, which afford an attractive and efficient means of exercise.

In addition to the advantages of a well-equipped sanitarium, the St. Helena institution affords the further advantage of the California climate, which is so helpful to many invalids.

We were recently informed that a wealthy gentleman is erecting in San Francisco a six-story building for the use of the city branch of the St. Helena Sanitarium. This institution may be congratulated that Providence has raised up so generous a friend. Certainly no work anywhere on the earth is more worthy of such generous and friendly assistance than is that of the St. Helena institution and the whole sisterhood of sanitariums, all of which are conducted in accordance with the same principles of philanthropy and self-sacrifice.

Within the last six or seven years the advantages of sanitarium methods of treating disease have been shown in a remarkable manner. During this brief period there have been established in different parts of the world more than a score of institutions similar in character and purpose to the Battle Creek Sanitarium, which we have called the mother institution.

The Chicago Branch of the Battle Creek Sanitarium, which was opened in the spring of 1893 at 26 and 28 College Place, Chicago, was the first of these daughter establishments. This institution, which has recently been extensively fitted up with all the modern appliances for the rational treatment of disease, affords the citizens of Chicago and neighboring cities, who do not have time to spend several weeks in a sanitarium, an excellent opportunity for obtaining the same treatments which are given at the Battle Creek Sanitarium.

The Nebraska Sanitarium, located at College View, a suburb of Lincoln, Neb., was the next in order. The opening took place Jan. 1, 1895. This sanitarium was soon filled to overflowing, and the necessity for more room becoming apparent, the North Hall, one of the large College buildings adjacent, was obtained. The work of the institution continued to increase, showing that the people of Nebraska and the adjoining States appreciated the great benefits to be derived from a sanitarium in their vicinity.

The Colorado Sanitarium, located at Boulder, Colo., was the outgrowth of a demand for a sanitarium in the Rocky Mountain region. July 1, 1896, a large five-story brick building was dedicated.

The institution is located on beautiful grounds covering one hundred acres, including a fine mountain peak, and commanding extensive landscape views, which for variety and beauty can hardly be equaled. The site adjoins the thriving city of Boulder, and is about one hour's ride by rail from Denver, which is easily discernible from the peaks around Boulder. Besides the large main building recently erected, there are two fine cottages.

The institution is equipped with every convenience for the scientific application of hydrotherapy, and for special treatment of pulmonary disorders. The altitude is between five and six thousand feet, just that which has been determined to be best for diseases of the lungs.

The success which had attended the sanitarium effort thus far now began to be recognized in other countries than our own, and it was decided to establish such institutions wherever an actual need became evident.

The Guadalajara.—Old Mexico, our neighboring republic, offered many advantages favorable to the beginning of a sanitarium. Prior to the establishment of such an institution in Mexico, a medical mission had been successfully conducted for a number of years in the city of Guadalajara, and the popularity of this enterprise opened the way for a sanitarium, which has been built, and has been receiving patients for several months.

Guadalajara, the point selected for the sanitarium, is one of the first cities in the Mexican Republic. Its climate is the most salubrious of any in Mexico, and perhaps is not surpassed by any in the world. The institution is well equipped, and affords all the advantages of a modern sanitarium. It is conducted by physicians and nurses who are in every way familiar with the methods of treatment employed at the Battle Creek institution.

THE CLAREMONT SANITARIUM.

The Skodsborg Sanitarium has been started at great sacrifice, and involved the contraction of a large debt, which is a source of no small anxiety and burden to Dr. Ottosen, the superintendent, and his colleagues. It is to be hoped that some generous friends will be able to raise enough money to lift this indebtedness, and place the institution in a position which will enable it to carry on its noble work with less embarrassment.

The Claremont Sanitarium, located at Claremont, a suburb of Cape Town, South Africa, was opened early in 1897 for the reception of patients. At the time of the opening every room was taken, and it was only a short time before an additional building had to be erected in order to accommodate the large number who wished to partake of the advantages offered. The location is an exceptionally fine one, commanding a sightly view of the open country around, and from the tower a view of Table Bay and the shipping.

The South Lancaster Sanitarium, located at South Lancaster, Mass., was opened during the summer of the present year. It is the only establishment of its kind in New England. The institution is beautifully located, and is readily reached from Boston and other neighboring New England cities. It is well equipped, and is under the management

of a competent corps of physicians and nurses, all of whom had previously been connected with the Battle Creek Sanitarium.

The other institutions scattered all over the world, but which our limited space will not allow us to describe, are located in places noted for the beauty of their surroundings and for their climatic and sanitary advantages. Each one offers to its patrons the advantages of rational treatments as employed where the "sanitarium idea" is carried out to its fullest extent.

THE SOUTH LANCASTER SANITARIUM.

Tolstoi Arraigns Society.

Count Tolstoi, in writing on the morals of diet, in the *Vegetarian Messenger*, takes the world to task with no uncertain voice. He says:—

"Look at the faces and figures of the men of the present age and present society. All these faces with chins and hanging cheeks, these fat limbs and rotund stomachs, speak eloquently of a life full of debauchery. How can it be otherwise? Ask them what is the principal motive of their life, and strange as it may appear to us who are so used to conceal our real likings and so willingly employ artifice, the chief end of the majority of men of our society and of our time is the satisfaction of the palate, the pleasure of eating; in a word — gluttony. From the poorest to the richest, gluttony is the chief aim, the primordial pleasure, of our life. The working people are an exception only so far as poverty prevents them from yielding to this passion. As soon as they can obtain time and means, they, in imitation of the higher classes, seek rich foods, and eat and drink as much as they can.

"The more they can eat, the more they think they are happy, the more they fancy they are strong and healthy. The higher classes confirm them in this opinion, as they also regard food from the same point of view.

"Behold these rich men. Listen to their conversation. How lofty are the subjects which interest them — philosophy, science, art, poetry, the question of the right distribution of wealth, the good of the people, and the education of the young. In reality, for the majority all this is falsehood. This is merely pastime between their real occupations and meals, when the stomach is full, and they can not eat more. The one and invariable interest of these people, both men and

women, is eating, and particularly is this the case when once the spring-time of life is over. How shall we eat? What shall we eat? when? where? No celebration, no rejoicing, no inauguration, is allowed to be without a banquet.

"Look at travelers. You can notice it even more easily in them. How interesting the museums, the galleries, and the parliament house are. And where shall we dine? Where is the best dinner to be had? Look at the men assembled for a dinner; they are elegantly dressed and perfumed, and as they sit around a table decorated with flowers, how joyfully they rub their hands and smile.

"If you look to the bottom of most men's souls to know what is their real desire, you will find that it is appetite. What is the worst punishment for children? —To be condemned to bread and water. Which is the best-paid servant?—The cook."

Queer Inconsistencies.

Dr. J. A. Crisler, in the *Mississippi School Journal*, shows rather strikingly some of the peculiarities of our modern educational system. He says, speaking to teachers:—

"You would have your pupils name the capitals of every land and clime, but decry the importance of a familiarity with the bones in their own body.

"You would ask them to trace the great rivers and water-courses that begin in a tiny spring and end in a surging sea, but their knowledge of the blood-vessels in their own bodies is so very imperfect that many thousands have bled to death on battlefield and playground, from a simple wound, like a child drowning in a tub.

"You would have them travel over the great northwest and review the golden fields of grain, and show them the mighty mills that make our bread, and yet never teach them the first step in the digestion of starch.

"You do teach them in daily object-lessons to eat the flesh of beasts and birds, and to slay to eat, yet look with pitying eye on the fading of a flower; forgetting that this flesh may and frequently does contain the germ of deadly fever, the seed of tapeworm and cancer, or the bacillus of tuberculosis.

"By example you teach them to stimulate on spices, condiments, tea, coffee, and wines, thus forming the groundwork for an insatiable thirst for liquors and tobacco; then you watch and wonder why they fill drunkards' graves, or end their lives by their own hands, or do even worse than this."

"THE Athenian court, called the Areopagus," says an old English writer, "was particularly careful to punish those who were guilty of cruelty to animals. Even a child, who, in the wantonness of his recreation, had deprived an innocent bird of its sight, was condemned by one of these Grecian magistrates, and suffered a very severe punishment."

HERE is a fine formula for health and longevity:—

Leave work before you are tired.

Stop eating before you are stuffed.

Think less of the troubles of the world and naught of your own.

Let nothing come between you and your God.

And last, but not least, in the words of the immortal Irishman, "If you can't be aisy, be as aisy as you can."—*Eleanor Kirk.*

IT is never too late to be what you might have been.— *George Eliot.*

EDITORIAL.

NERVOUS PROSTRATION: WHAT IS IT? WHY IS IT?

THE writer thinks he knows all about it: he has met thousands of people who had it, and he has had it himself.

After working thirty or forty hours steadily, without a minute's sleep and with scarcely a morsel to eat, when one finally falls into bed at three or four o'clock in the morning, he is likely to have all the symptoms of nervous prostration in a fully developed form. But in the writer's experience a good night's sleep makes him well again.

Nervous prostration is a condition in which the nerve centers are exhausted of their stores of energy. Properly speaking, nervous prostration, or, as physicians call it, neurasthenia, is not a disease, but simply a group of symptoms which indicate a weakened state of the nerve centers. But these symptoms and the state of the nerve centers are only indications of some other morbid condition in the constitution of the individual; they are a result.

Nervous exhaustion is frequently attributed to overwork. This is a mistake. Rest will cure all the damage that work can do, leaving out of consideration, of course, structural or mechanical injuries which may result from overstrain.

The only difference between a tired man and a man who has neurasthenia is that the latter is chronically and constitutionally tired. Sleep and rest do not cure him. He is not lazy, but languid; disposed to take up accustomed tasks, but lacking the force and energy to perform them. In most cases this condition has nothing to do with work, unless it be the result of too little work.

Neurasthenia, in the vast multitude of cases, is nothing more or less than chronic poisoning, a state of the body in which the blood and tissues are constantly filled with poisons produced in the alimentary canal in such quantities that the liver can not destroy them, or the kidneys remove them as fast as they are developed. When this accumulation reaches the point of tissue saturation, then the symptoms of poisoning appear. The nerve centers are stupefied by narcotic poisons produced by indigestion, these poisons being similar in their effects to opium and other narcotic drugs. The brain may be excited by poisons formed in the alimentary canal resembling strychnia in their effects. The whole body may be deranged by toxins and ptomains which subject the body to a perfect fusillade of toxic influences as if a whole apothecary shop had been turned into it. A chronic dyspeptic is bound to become a neurasthenic sooner or later,— generally sooner,— for his stomach and intestines have become the hold of every unclean and hateful germ. They are converted into a factory of nerve-irritating, brain-stupefying, heart-exciting, tissue-paralyzing poisons which are capable of deranging every vital function, perforating every vital process, and opening thousands of doors to germs and other causes of disease.

The most important thing to be done for gastric neurasthenia is to remove the causes, to correct the dietary; set the patient to eating right, and his stomach will gladly resume its normal functions, and will become so inhospitable toward the microbic parasites which infest it that they will disappear or perish. The neurasthenic generally recovers soon enough if he can be persuaded to assume a normal mode of life. If he is a self-made prisoner in a counting-room or an office, he must release himself from his fetters, and flee to the liberty of the woods and fields, and in the fresh air find a priceless benison.

He must not only exercise right, but he must eat right. Two meals a day, well eaten, in proper quantity, composed of fruits, grains, and nuts, nature's choicest products,

and which contain exactly the elements for building brain and muscle and storing them with vital energy,— these are true sources of energy. Flesh affords energy, it is true, but only at second hand and deteriorated.

A neurasthenic should sleep from eight to ten hours a night, or if he can not sleep, let him lie in bed and rest. A warm bath at bedtime, at 95° or 98° temperature, for half an hour or an hour, will often induce sleep when hypnotic drugs of every sort fail utterly unless administered in such overwhelming doses as to produce a poisoned sleep, that is sure to be followed by a wretched awakening. He must cut off all unnecessary expenditure of energy, as a miller sometimes stops his wheel that his pond may fill up. Mental and moral peace and content of mind are essential conditions for rapid recovery from neurasthenia.

The daily cold bath has tonic powers equaled by no known drug. The patient should not attempt to administer the bath himself. The water should generally be as cold as can be borne without discomfort. Very cold water can be applied if employed in the right way. The vigor of the application should be increased from day to day, until very strong and powerful effects are produced. In another article in the present number we have undertaken to show how to use water as a tonic. The neurasthenic reader is advised to peruse this article with care, and is assured that by the application of the measures suggested, most excellent results may be obtained.

THE BEST TONIC.

THE universal cry of our deteriorated and rapidly decaying race is, "O for a stronger tonic!" The enormous demands made on tonics may readily be appreciated by any one who will take the pains to glance over the columns of either a newspaper or a medical journal. In the one he will find displayed in blatant headlines the pretended virtues of P. P. P. Quackum's Lightning Elixir, while the latter sounds in more technical phrases the virtues of the wonderful pharmaceutical preparations which from the claims made for their restorative and reconstructive powers might lead one to believe them capable of raising the dead if applied before decomposition had begun.

It is pitiful to note the dense ignorance of multitudes in relation to the true character of tonics. Medicinal tonics are not curatives: they are only whips. They restore the tired nerves of the overworked heart in the same way that a sharp blow from the stage-driver's lash puts energy into the wearied nerves and muscles of his stumbling steeds.

The man who needs a tonic needs something more than a whip. His condition requires more than something which will enable him to get a little more energy out of himself, to drain his cup of life to the dregs; it wants something whereby the store of energy may be replenished: whereby the exhausted nerve cells may be filled with energy-restoring granules, and the shriveled nerve cells filled with accumulated vigor extracted from the blood.

The only source of energy is food. Energy comes to the earth in the sunlight. It is stored up in little bundles by plants in the form of grains, fruits, nuts, and other vegetable products. Man and other animals eat and digest these food products, transforming them into muscle, brain, glands, and other organic structures, thus becoming possessed of the energy translated to us from the sun in the solar beam.

The tonic-taking habit, well-nigh universal among the weakened men and women who eke out a pitiable existence in our large cities, has come to be an evil almost as gigantic in proportions as the liquor and tobacco habits. The majority of drug tonics, in fact, contain alcohol, and owe their influence largely to its effect upon the brain and nerves. Other drugs, equally as powerful as alcohol, or even more potent than this drug in deceiving the nerves, are combined with this baneful poison, and do their mischievous work stealthily, insidiously,

steadily, while the victim veritably believes he is getting better.

Medicinal tonics are simply nerve foolers. They make the weary man think he is rested when he is not; they make the worried woman think her nerves are stronger when they are steadied only by increased tension. They persuade the student that he is getting ahead famously, notwithstanding his midnight toil and lack of physical exercise, while in reality every spoonful of the drug which he swallows hastens the day of complete nervous bankruptcy.

So much for agents which, although pretended tonics, are really such only in appearance. Let us now consider real tonics.

Fresh air is one, especially cold air. There is nothing like it. How it brightens and animates the face, and puts vigor and elasticity into the step. Every one knows how a brisk walk out of doors on a frosty morning reddens the lips and the cheeks. There is not a drug in existence that produces even the appearance of such a marvelous transformation. And this betterment is real. There is no reaction from it. It is a change in the man, not simply a change in his feelings. The life-giving oxygen which has entered into his body and penetrated to every nook and cranny of his tissues has burned up the poisons which had been making him dull and stupid and languid like a man under the influence of a poisonous drug. The vital forces have by exercise been stimulated to more vigorous activity; the vital resistance has been raised, nerve tone has been elevated, appetite and digestion have been improved, the benumbed and slumbering tissues awakened.

Electricity is a wonderful tonic. By the application of electricity the muscles of a dead man may be made to contract, and to imitate to a remarkable degree the voluntary movements of the living state. There is no drug that begins to possess the stimulating power of electricity.

But the greatest tonic of all is water, pure cold water,—water unadulterated with minerals or drugs of any sort.

The tonic effect of water is chiefly due to its low temperature. By the cooling of the nerves of the skin they are made to transmit to the nerve centers powerfully stimulating impulses whereby every function of the body is excited to increased activity; the secretory glands increase their output, and there is more saliva to digest the starch, more gastric juice to digest the albumin, an increase of bile or pancreatic juice to digest the fats and other food elements, the muscular movements of the stomach and intestines are quickened, and so the whole digestive process is accelerated and improved. The heart's activity is increased, thus the movement of blood throughout the body is accelerated. The lungs, skin, and kidneys are more active, so that the poisons of the body are more rapidly and perfectly removed. Better digestion makes better blood; better blood, more actively circulated, makes better nerves, glands, tissues, and so a better stomach.

This is a genuine and real tonic effect, just what the weak man needs,—just what the neurasthenic, the nervously exhausted and worn-out business man, the tired mother, is looking for. But, unfortunately, this marvelous power of water is little understood or appreciated by the millions who in stupid ignorance are blundering on with nostrums and nerve-fooling drugs, wondering why each week, each month, each year, finds them a little lower in strength and energy and spirits, in spite of the swallowing of dozens of bottles of highly vaunted tonics.

One great impediment to the use of water is its extraordinary cheapness. It costs nothing; it can be had for the taking. Another objection is that it is so much trouble to use it. Two or three little pellets the size of the head of a pin can be dropped upon the tongue, and are out of sight in a second. It is a great deal easier to carry a pill box in the pocket and to count out a few granules than to go through the operation of a cold bath or some other hydriatic procedure of the same sort. Perhaps the greatest obstacle of all is the almost universal lack of knowledge of how to use water in such a way as to obtain from it active and efficient curative effects. One purpose of this article is to give a few simple directions for the use of cold water as a tonic. We have not space in this number

to illustrate the methods described, and for the same reason must make our descriptions as brief as possible, but in future numbers we will give more extended descriptions with illustrations.

First of all it should be remembered that in the use of cold water the application must be adapted to the individual's condition. A person who has not been accustomed to the use of cold water must begin with very moderate and gentle applications, and to produce the best effects, the intensity of the application must be increased as the individual becomes able to react and thus to utilize the good effects of this powerful agent. The reaction following the application is the means by which its tonic effects are secured. Without good reaction no good effects can be experienced. The reaction is the thing sought.

Here are a few simple methods of applying water, briefly described, and given in the order of their vigor or intensity, beginning with the mildest, and progressing gradually to the most vigorous, thus forming a sort of therapeutic ladder up which the neurasthenic or nervously prostrated invalid may climb to restored health, by the combined aid of baths, proper diet, proper exercise, and a wholesome life generally. It should be understood that in all these applications the invalid must have the assistance of an intelligent and if possible a trained bath attendant.

1. *Cold Wet-Hand Rubbing.*— A small area of the surface, as the skin of an arm or some other area of equal extent, is rubbed with the hand rapidly dipped in cold water, until it is reddened, and then dried with a towel and rubbed until thoroughly warm and flushed. The corresponding area on the opposite side is then taken, and thus the whole body is gone over. Every portion of the body, except that receiving treatment, should be covered with a blanket. The whole treatment should occupy from fifteen to twenty minutes, and may be applied twice a day. The temperature of the water should at first be from 60° to 70°, being lowered one or two degrees each day until it is 40° or even lower. By this means the bath is graduated, and the patient is prepared for the next.

2. *Cold Friction.*— This application resembles the preceding in the general method, but the friction is made with the hand covered with a mitt. This mitt is made of rather coarse cloth, as alpaca or some similar fabric. The writer has found the Turkish cloth used for lining the garments of priests most serviceable for this purpose. The mitt is wet in water at 60°, then applied to a small area of the skin, the wetting being repeated two or three times, and the rubbing continued until the part is reddened. The part is then dried, and another part treated in the same manner, until the whole body glows like the blush of a cheek. Accelerated blood movement, increased vigor of the heart, improved appetite, and brightened intellectual faculties follow this application so promptly and to such a marked degree that its beneficial effects are at once recognized. The application may be made twice daily. The bath may be graduated by gradually lowering the temperature of the water until ice-water is employed. It may also be graduated by increasing the quantity of water applied to the skin by greater saturation of the mitt.

3. *Cold Wet-Towel Rubbing.*— In this application the towel is wrung out of cold water and applied to the skin by the hand, which is thoroughly rubbed over the towel, not with it. The patient may hold the towel in position by placing one hand on each end of it while the attendant rubs vigorously to encourage reaction. The temperature of the water, beginning at 60°, may gradually be lowered to 40°.

4. *The Wet-Sheet Rub.*— The patient stands in a foot bath filled with water at 104°. A sheet ten feet long and five or six feet in width is wrung quite dry out of water at 60°, and wrapped quickly about him. This should be wound once around the body, under the arms, and then brought over the shoulders. It may be tucked between the legs. Two attendants should rub the person outside the sheet until the sheet is thoroughly warm, from one to three minutes. He should then be wrapped in a dry sheet, exercised thoroughly, and rubbed until warm. Very little good is obtained when the sheet

is wrung out of water at a temperature higher than 60°. The beneficial effects are intensified by gradually lowering the temperature to 55° or even 50°.

5. *The Half Bath.*—The patient sits in a full bath-tub into which water at from 70° to 75° has been drawn to the depth of six inches. He is rubbed vigorously from one to three minutes by the attendant, who at intervals of from thirty to forty minutes dips up water from the tub and pours it upon his back and shoulders for ten or fifteen seconds. The temperature of the bath may be gradually lowered to about 60°.

6. *The Douche or Spray Bath.*—A stream of cold water, at from 60° to 70° temperature, is directed upon the patient with as much force as can readily be borne. If the force is sufficient to produce slight stinging sensations, the best effects will be realized. More force can be used upon the back and legs than upon other parts of the body. The duration of the bath should not be more than from five to thirty seconds. The patient should be vigorously rubbed afterward, and should exercise until he is warm.

Before any cold bath, the head should be wet with cold water, at a temperature lower, if possible, than that of the intended bath. The scalp should be thoroughly wet, also the neck, face, and upper part of the chest. A cold towel, wet with water at the same temperature, should be wound around the head and worn during the bath. Care should be taken to see that the skin is warm before any cold application. It is best to warm the body by exercise and by wearing heavy clothing, but the body may be heated by means of a warm bath taken just before the cold application. In case of feeble persons, hot bags or heated bricks may be placed about the patient, well covered with blankets, just before the application is made, but the heating should never be so prolonged as to produce sweating and weakening effects, and exercise should generally be taken after the bath to secure general reaction. Headache, languor, weakness, sleeplessness, loss of appetite, indicate that the cold application has been too severe, or that sufficient exercise has not been taken either before or after the bath to secure good reaction.

HANDY HOME REMEDIES.

It may be five miles to a doctor, and ten miles to a drug-store, but in every home there is a healer superior to any doctor and a remedy worth more than all the drugs in the apothecary shop. This healer is nature, the divine life that dwells in every man, that created him, cares for him, repairs the damages resulting from his daily work, and heals him when he is sick. This is a truth the world needs to recognize. The power which creates is also the power which heals. There is not one power to create, and another power to heal, but there is one great beneficent curative force in the universe which made man in the first place, which created him out of humble elements, and under whose magic touch the same transformation takes place day by day in the conversion of bread, fruits, nuts, or other wholesome foods into brains and bones and muscles. This same power creates health out of sickness, strength out of feebleness, comfort out of pain, and by the same processes by which the man is created out of the boy, the boy from the microscopic embryo.

There is no home so poor that water is not to be found in or near it. Water is the vehicle of the living forces to which we owe the miracle of life, and which, traveling from all the cells and fibers of the body, heals, repairs, vivifies, and energizes. This simple, limpid, pellucid water is the mightiest curative agent known. Unfortunately for man, he is unacquainted with its marvelous qualities and powers. Simple things are always overlooked. An accurate knowledge of the use of water will enable any intelligent person to do more for the relief of the symptoms of disease, and to aid nature in the cure of disease itself, than can be done in any other way.

It is not the purpose of this article to show

that physicians are an excrescence upon human society and can be dispensed with, but it is the writer's firm belief that men and women should be made more intelligent respecting their bodies and their care by the use of this universal remedy, which is ever at hand for immediate application.

We have not space here to dwell upon the general properties of water, and to point out the special applications of cold water, hot water, neutral water, water in motion, water at rest, water in the form of baths, or moisture in the form of compresses; we propose only to describe briefly a few simple modes for using it.

The Fomentation.— This is an application of a hot compress, usually a thick folded flannel cloth, applied a number of times in succession, at a high temperature. There is no such thing as a *cold* fomentation.

The best material for a fomentation cloth is a piece of an ordinary woolen bed blanket, spongiopilin, a large flat sponge, or a thick woolen cloth of any sort; in the absence of anything better, a thick mass of cotton or cotton cloth, as cheese-cloth, toweling, etc., may be used.

The cloth should be of sufficient size so that when folded to four thicknesses it will well cover the part to which the application is to be made. Fomentations generally cover too small an area. If the affected part involves an area the size of the hand, the fomentation should cover a territory three or four times as large. The effect depends much upon the size of the surface to which the application is to be made. A pain confined to a point not larger than the tip of a pin, if acute and constant, may require an application covering one or two square feet.

In addition to the flannel used for the fomentation, a much larger dry flannel or dry blanket should be at hand, to cover the moist cloth so as to retain the heat. Two or three large towels are also needed.

Besides the towels and flannels a supply of boiling water should be close at hand. If the fomentation must be given at some distance from the source of supply, a pailful of boiling water may be made to retain its heat for some time by covering it well and wrapping it with a woolen blanket or a piece of carpeting. The proper application of a fomentation consists of the following steps: 1. Preparation of the patient; 2. Wringing the flannel out of hot water; 3. Renewal of the application one or more times; 4. Finishing treatment. These steps may be described as follows:—

1. The part to be treated should be thoroughly exposed, the skin laid bare, and a little vaseline or cocoa-butter rubbed over the surface to be treated, especially when the treatment is to be given daily. The patient's clothing and the bed clothing should be arranged so that it will not be wet, otherwise the patient may take cold after the application. The patient should lie upon the bed or couch. Care must be taken to see that the extremities are warm, and if there is much congestion of the head, a cooling compress should be applied to it before beginning the fomentation. The position of the patient should be such as will render the application of the hot compress most convenient.

2. Unless too large, place the fomentation cloth in a large towel, fold the towel around it so as to leave the ends of the towel free; then taking hold of the ends of the towel, dip the cloth in the hot water until completely saturated, and heated to the temperature of the water. Then wring over the pail by twisting the ends of the towel and stretching lengthwise.

Another method is partially to unfold the cloth, dip one end into the water, fold together again in such a way that the dry portion will be on the outside. Then, by wringing, the dry part will become saturated by the absorption of water from the wet portion. By using an extra large fomentation cloth, the central portion may be wet, leaving the ends dry to be grasped by the hands for twisting and wringing.

The intensity of the application and the length of time the fomentation will retain its heat depend upon the amount of water left in the cloth, as well as upon the temperature of the water. When very hot water is to be used, the cloths must be wrung very dry, otherwise there will be danger of blistering the patient. Another precaution which it is

well to observe is to place the dry flannel over the skin so that the heat of the fomentation may reach the skin gradually. More water is left in the fomentation, and a higher temperature may be employed when the skin is thus protected. When so intense a heat is not needed, but rather a poultice effect is desired, very soft flannel should be used, and a considerable amount of water should be left in the cloth, but the temperature should not be so high as to make the application painful.

3. Ordinarily, when a mass of flannel of considerable thickness is used, the fomentation will require renewal at the end of five minutes. When very intense heat is required, or a thin compress is used, the renewal must be at more frequent intervals. In other cases, a sufficient amount of warmth may be retained for eight or ten minutes. If desirable or convenient, a hot-water bag, a hot bottle, a heated brick, or other heated object may be applied between the moist cloth and the dry covering.

When the moist cloth is removed for renewal, the dry wrappings should be quickly replaced, and the wet cloth should be wrung out of hot water and replaced as quickly as possible, so that the surface may not become chilled by evaporation, and the effect of the fomentation be thus neutralized. An excellent plan, when continuous heat is required, is to have a second cloth wrung out and ready for instant application when renewal is necessary.

4. The duration of the fomentation must depend upon various conditions, most of all upon the patient's own sensations, especially when it is applied for the relief of pain. The beneficial effects of the fomentation should be still apparent several hours after the application. If the symptoms which have been relieved return, it may be necessary to renew the application. Occasionally, continuous application for several hours is necessary, especially in cases in which acute pain is present. So long as the pain or other urgent symptom is relieved by the application, and returns when it is removed, the application may be continued. Every half hour, however, the hot compress should be replaced for two or three minutes by a well-wrung cool towel.

In concluding the treatment, a cold application should always be made. This should consist of a towel wrung very dry out of cold water — the colder the water, the better. This should be applied quickly over the whole surface which has been reddened by the fomentation, and should be retained in place from fifteen to twenty seconds. It should then be removed, and the part rubbed slightly, and immediately covered with dry flannel. In cases in which pain is not present, no harm would result from a more thorough cooling of the part, but it is only necessary to remove from the skin the heat which has been introduced by the fomentation. By this plan, circulatory reaction is produced, and a thorough revulsive effect is secured without producing thermic reaction, which is undesirable when either pain or acute inflammation is present. In the last class of cases it is often desirable to follow the fomentation by a continuous cold application, as in pneumonia, pleurisy, erysipelas, and in some cases of acute arthritis.

It is often desirable to interrupt the fomentation, when employed for a long time, by the application of a cold towel in the manner before described. Such an application may be made with good effect as often as every fifteen or twenty minutes, or after three or four changes of the fomentation, when the treatment is prolonged.

Fomentations may be improvised in a great variety of ways, as the author has often had occasion to learn by personal experience. One night, when stopping in a Western hotel some years ago, the writer was suddenly aroused by a loud outcry, and was called to the bedside of a woman suffering from a distressing pain in the head. She was almost beside herself, and writhed in agony as the paroxysms came on, every five or ten minutes. No hot water being obtainable, the following plan was adopted for supplying a hot compress: A towel was folded and wet, then laid upon the bottom of a large dipper held bottom upward. The inverted dipper was then held over a kerosene lamp, as close as possible to the top of the chimney without producing smoke. In two or three minutes the compress was steaming hot, and by the

time the first one was cooled, another one was ready for instant application. Almost immediate relief was experienced, and in ten or fifteen minutes the patient was sleeping comfortably, and in the morning was in usual health.

The Heating or Stimulating Compress.— This most valuable hydriatic procedure consists of a thin, moist, linen compress well covered with flannel, with or without an outer covering of impervious material.

The heating compress may be applied to any part of the body. Its most useful applications are to the trunk, the chest, the neck, the joints, and the head. It is one of the most practical and effective applications in the treatment of chronic rheumatism, for the relief of pain and to restore lost joint motion. Fomentations applied night and morning, followed by the heating compress, to be worn during the succeeding twelve hours, constitute a good method for the treatment of rheumatic joints.

The Cold or Cooling Compress.— Hippocrates was familiar with the cooling compress, employing it in the treatment of fevers by having linen cloths dipped in cold water and applied to the hottest parts, while the patient was at the same time given cold water to drink. The temperature to be employed was from 60° to 75°. For sedative effects, the compress may be changed every five or ten minutes. When thus used, permanent contraction of the surface vessels is maintained, and in addition to the local sedative effect, a powerful antiphlogistic effect is produced in the reflexly associated viscera.

The cold compress may be employed in such a manner as to influence the circulation of the liver, spleen, stomach, kidneys, lungs, brain, pelvic viscera,— in fact, all the internal structures of the body, hence it is exceedingly useful and important.

The Heating Head Compress.— A cheese-cloth compress wet in very cold water is applied to the head after the hair and scalp have been thoroughly wet with cold water. A rubber cap like a lady's bathing-cap is then placed over all, and the retention of heat soon warms the compress and develops the well-known effects of such an application. Where there is a heavy growth of hair, simply wetting it and covering it with the rubber cap is sufficient to develop the full effects of the stimulating compress.

On rising in the morning the scalp must be well drenched with cold water, then rubbed dry, and protected by a cap during the day, to prevent taking cold. This is a capital measure for promptly relieving a cold in the head.

The Throat Compress.— In this compress it is desirable to bring under the influence of the application the skin covering the lower jaw from the chin backward, the sides of the face from the angle of the jaw to the ear, and the sides and back of the neck. The compress wound about the neck is of very little use for the ordinary sore throat in which the fauces and perhaps the tonsils are involved. A properly prepared compress of linen or cheese-cloth eight inches wide and long enough to pass around the neck and fasten at the back is split through the middle two thirds of its length, then wrung out of cold water very dry, and is ready for the application. It must be held in place by means of a cheese-cloth bandage about four inches in width, this having been previously provided in the form of an ordinary roll bandage. The wet compress is then put in place, the two "legs" being brought around the sides of the neck, meeting behind, and a dry flannel bandage applied in such a manner as to hold the wet cloth in contact with the surface named. For this purpose the bandage must be passed over the head as well as around the neck. In applying it, the turns may alternate, one going over the head, the other going around the neck.

This is a very excellent application for the relief of chronic sore throat, especially such as is contracted by exposure at the back of the neck, or by getting the feet chilled or damp. When applied at bedtime and removed in the morning, the parts should be laved with very cold water.

The Neutral Bath.— This is simply a full bath at a temperature of 92° to 98° F., and administered in the usual manner.

Friction should not be administered, unless

it be very gentle rubbing when the patient first enters the bath if he feels any inclination to chill. Chill will not occur, however, if the temperature of the bath is properly adjusted to the patient's condition. The average temperature of the bath should be 94° or 95°. When the patient is feverish, the skin hot and flushed, even though there is no rise of temperature, the bath may be 92° or 93°. If the patient is thin, bloodless, and has little heat-making power, the temperature of the bath should be from 96° to 100°. All mechanical effects should be avoided after as well as during the bath, as the purpose of the bath is to secure sedative effects. The duration of the bath, when applied for the relief of insomnia, should be from fifteen minutes to an hour. When used for the reduction of temperature, however, it may be continued for a much longer time, as from three to four hours, and in certain cases of acute mania, obstinate insomnia, or fever, and given at a temperature of 92° or 93°, it may be continued for several hours consecutively.

The Wet Girdle.— This simple hydropathic or hydriatic measure is of the greatest benefit in a large variety of conditions, especially in almost all forms of indigestion. It is easily applied.

A linen towel long enough to reach one and a half times around the body is wrung as dry as possible out of very cold water. This is quickly applied over an area from the umbilicus to a point an inch or two below the lower end of the sternum, spread out smooth, and drawn about the body snugly. It is then covered with flannel about three yards long and two inches wider than the towel, so that it may extend a little beyond each edge of the wet bandage, and thus exclude the air. The flannel bandage is drawn tight and pinned.

The wet girdle may be worn at night only, or both night and day. When it becomes dry, it should be removed or renewed. If the surface does not become warm readily after the first application, it should be rubbed with the hand until red, before the bandage is put on.

The wet girdle is a valuable remedy for sleeplessness; it is also useful in intestinal catarrh, inactive liver, enlarged spleen and liver, and for a great number of visceral pains which lurk about the abdominal region.

A Lot of Killing.

According to late newspapers, Emperor William, who is visiting his grandmother, went shooting the other day in the royal "preserves," and succeeded in killing 327 rabbits, 178 pheasants, and one partridge with a Mauser magazine rifle.

Emperor William may have been a little hungry, as he was out before breakfast, but it is not at all likely that he created this half a thousand corpses with the expectation that they would decorate his breakfast-table. Besides, he is not in such close circumstances that it is necessary for him to go out and "hustle for his breakfast," as they say out West. Emperor William and his suite went into the royal park to shoot those tame pheasants for no other reason than that they wanted to kill something. These royal personages do not often get near enough to the enemy in war to have a hand in the killing. Besides, Germany has not had a chance to do any fighting for some time back, so it is necessary to keep "preserves" in which a lot of butchering may be handily done now and then to keep alive the war spirit, which must be maintained in order to preserve the "national life," "love for the fatherland," "dignity of the state," and other traditional ideas. Enormous tracts of land in both England and Germany are withdrawn from settlement and cultivation for no other purpose than that this cruel and ridiculous so-called "sport" may be indulged in by royal personages, who would find much better opportunity for exercising their muscles, if this is the object in view, by the aid of an ax, a sawbuck, a hoe, or a turn at a pair of plow handles.

Kings are an expensive and ridiculous luxury, but they still have to be maintained in certain parts of the world.

Pro-Alcohol Arguments Rebutted.

The great number of newspaper articles which have recently appeared, defending and advocating the moderate use of alcohol, gives especial value to an excellent summary of facts respecting alcohol, by Dr. Bienfait, and quoted by the *Medical Record*, one of the leading medical journals of the country, as follows:—

"1. Is alcohol a digestive?—No; its ingestion produces a passing excitation, interrupts the proper action of the muscles of the stomach, because alcohol acts as an anesthetic after having irritated the walls of the stomach, and drives the blood to the skin, thus hindering the action of the gastric juice.

"2. Is alcohol an appetizer?—No; it produces an excitation of the stomach which causes a sensation taken for hunger.

"3. Is alcohol a food?—No; it does not correspond to the definition of a food, and the heat that it seems to produce does not serve as actual warmth.

"4. Is alcohol heating?—No; it causes a flow of blood to the skin, and a lowering of temperature.

"5. Is alcohol a stimulant?—In no case, either physical or intellectual.

"6. Is alcohol a protector against contagion?—No; it predisposes the body to contagion.

"7. Can we live without alcohol?—This idea that we can not live without alcohol is a prejudice that numerous facts contradict.

"8. Is alcohol good for children?—It should never be given to children.

"9. Does alcohol increase longevity?—According to reliable statistics, alcohol diminishes longevity."

Danger in the Use of Stomach-Tubes.

The use of the stomach-tube as a means of cleansing the stomach in certain forms of dyspepsia has become so common that it is important that the element of danger in its use should be made widely known.

After the tube has done its work, and the stomach has been emptied, and perhaps cleansed by pouring in a quantity of liquid through the tube, the tube not infrequently remains filled with water or with the contents of the stomach. In withdrawing the tube, the moment the inner end of it reaches the throat so that air is admitted, the contents are at once discharged into the throat, and if the epiglottis happens to be raised so that the way to the larynx is open, these find their way into the air-passages, producing violent strangulation and even syncope. This unfortunate accident is easily prevented by grasping the tube tightly with the thumb and finger close to the patient's teeth before undertaking its withdrawal. As an additional precaution, it is well to keep the outer end of the tube depressed below the mouth, so that the principle of siphonage may act as a means of preventing discharge of the tubal contents into the mouth if by any accident the fingers should release their grasp. Withdraw the tube as quickly as possible.

The Influence of Brandy upon Digestion.

A French medical journal reported, some time ago, an interesting experiment made by M. Lepine, for the purpose of determining the influence of brandy upon digestion. A dog weighing forty pounds was given a meal consisting of a little less than half a pound of cooked meat, with two and one-half ounces of brandy. Five and three-fourths hours later the dog was killed, and his stomach was found to contain almost two hundred drams of meat nearly intact. Digestion had scarcely begun. The mucous membrane was under the influence of congestion. The stomach contained between five and six ounces of a slightly acid fluid, which, when tested, was found to be entirely inert, possessing no digestive activity. Similar experiments have been repeated many times, and with like results.

From experiments undertaken by the writer some years ago, it was found that two ounces of brandy completely paralyzed the digestive work of the stomach. Eight ounces of wine lessened the activity of the stomach one half. Alcohol is a paralyzer; it is in no way beneficial or helpful for the performance of any physiological process.

ANSWERS TO CORRESPONDENTS.

Eggs — Substitute for Meat — Charcoal Tablets — Hypopepsia and Hyperpepsia.— Mrs. G. V. P., Maine: "1. Are poached eggs wholesome? 2. What will take the place of meat? 3. What are charcoal tablets for? 4. How often should cinnamon antiseptic be used for the teeth? 5. Explain the difference between hypopepsia and hyperpepsia."

Ans.— 1. Yes, but not the best food.

2. Nuts. Such nut preparations as protose all most perfectly resemble cooked meat in taste and appearance as well as in nutritive qualities.

3. They prevent fermentation in the stomach and intestines.

4. It may be used daily with advantage.

5. In hypopepsia the secretion of the gastric juice, especially the hydrochloric acid, is deficient; in hyperpepsia it is in excess.

Menu for a Delicate Child.— Mrs. B. A. C., Illinois, asks (1) for a menu for a delicate child a year old, who has but a few teeth; (2) advice as to its feeding during a three-days' journey on the cars.

Ans.— 1. There are many wholesome foods which may properly be taken by such a child, a few of which are buttermilk, zwieback with stewed prunes, rice with fruit or fruit-juice, granose, granola, granuts (the latter is especially to be recommended), bromose, nutta, malted nuts, stewed fruit, baked sweet apples, and stewed prunes.

2. Malted nuts, with zwieback, is the best thing we know of for feeding a child on a journey. Malted nuts tends to regulate the bowels, and is extremely wholesome and nourishing.

Flushing the Colon.— L. R. T., Pennsylvania, asks our opinion of the practice of flushing the colon two or three times a week with about a gallon of hot water.

Ans.— The practice is an exceedingly pernicious one. Hot water relaxes the bowels, destroys the muscular tone, and lessens the sensibility of the nerves, and the large quantity overstretches the intestine, gradually destroying its ability to contract. If the enema must be used, it should be small, about half a pint or a pint, never more than a quart, and cold water instead of hot should be employed. If hot water is necessary for colic, pain, or impaction, a small quantity of cold water should be used afterward to restore the normal tone of the intestines. So large a quantity as a gallon of water can not be introduced into the colon without overstretching and injuring it. It is true that in some cases the colon is already so greatly distended that it will retain a gallon of water, but in such cases, instead of maintaining the dilatation by frequent distention, an effort should be made to encourage the restoration of the organ to its proper dimensions by the stimulating use of the small cold enema, and the employment of a loosening diet consisting of coarse grains with fresh fruit. A vast number of people have been greatly injured by the wide circulation of quackish pamphlets encouraging the daily or triweekly use of enormous quantities of hot water. One charlatan who advertises extensively from New York City, and has sent out a cleverly written pamphlet telling his own story of peristaltic woes, has undoubtedly done a vast deal of harm in this way. The large, warm enema is sometimes necessary as a temporary expedient, but its habitual use can not be otherwise than damaging to a high degree.

Red Spots on the Tongue.— Mrs. J. H. R., Missouri, asks what causes red spots on the tongue, the tip of it being very red and sore. The spots were first noticed after eating fresh tomatoes. Her hands and feet seem puffed, and there is an inclination toward flatulency and constipation. What will cure her?

Ans.— This condition is most commonly associated with hyperpepsia or an irritable state of the stomach, both stomach and intestinal indigestion being evidently present in this case. We would suggest a dry diet consisting of zwieback or thoroughly toasted bread, or better still, granose, granola, or granuts, the latter being especially valuable in cases of this sort. Nuts or nut preparations may be taken in moderate quantities; protose, malted nuts, and bromose are especially to be recommended. A simple home treatment consists in the application of a fomentation to the abdomen at night, followed by the wet girdle, which is simply a linen towel wrung as dry as possible out of water, wrapped around the abdomen, and covered with a flannel bandage three yards long wound around the body and entirely covering the wet girdle.

Chronic Diarrhea.— H. I., Illinois, states his case as follows: "Chronic diarrhea since 1864. I have used sun cholera tablets to check it, but lost in weight. My appetite is poor, and food is repulsive. Cold water and even a current of cool air induces water brash, which is always troublesome nights and mornings. The least excitement causes increased heart action. What diet and treatment would you advise?"

Ans.— The case is probably too chronic to be cured readily by home treatment. The patient

would better visit a sanitarium where he can have the advantages of all scientific appliances. A correct diet would doubtless be of service. Meat, ordinary milk, mustard, pepper, peppersauces, ginger, pickles, and all irritating substances should be avoided. A hot enema should be administered twice a week; a wet girdle should be worn at night, and through the day also, if necessary, being changed once in every four hours. For mode of applying the wet girdle, see answer to the preceding question.

Pain Between the Shoulder-Blades — Grumbling in the Stomach — Pain in the Side.— H. S., Pennsylvania, writes: "I have a friend the left side of whose chest is flat, neither contracting nor expanding. He suffers severe pain between the shoulder-blades. Does the pain signify stomach trouble?"

Ans.— This patient may have collapsed lungs, or lungs bound fast by adhesions, or a lung congested by pneumonia. The pain between the shoulder-blades is doubtless due to disease of the stomach, with irritation.

Last Meal of the Day — Hot-water Drinking — Rest — "Blind" Headache. — Mrs. J. T., Massachusetts, queries: "1. What is best to eat for the last meal of the day? 2. Should one drink hot water between meals, for acidity of the stomach? If so, how much? 3. Ought one to lie down during the day more than an hour, unless tired, when he retires at 7 P. M. and rises at 6 A. M.? 4. What will relieve one of 'blind' headache?"

Ans.— 1. Fruit, if the meal is taken at six o'clock or later; if before four o'clock, or even as late as five o'clock, ordinary food may be taken; but at later hours, the food should consist only of fruit.

2. Hot water is a good remedy in certain forms of acidity, especially in hyperpepsia. It is taken with advantage half an hour before meals, in quantities of one or two glasses.

3. The amount of sleep indicated ought to be ample for a person not suffering from nervous exhaustion.

4. When such a headache is fairly begun, there is generally no means of completely controlling it, but it is possible by a proper course of life and suitable treatment to eradicate the difficulty. The proper cure of these cases is by prophylaxis, or prevention. Often a fomentation at night, followed by the wet girdle to be worn during the night, a cool sponge bath in the morning, fomentations to the head when suffering, followed by cold applications, fomentations to the back of the neck, with cold to the face at the same time, give prompt relief.

Distilled Water.— M. J. R., Maryland, asks (1) if distilled water is wholesome, and (2) what we charge for analyzing water.

Ans.— 1. Distilled water is the most wholesome of all beverages. This is true whether the water is distilled in an artificial distiller or from the clouds. Distilled water, to be palatable, must be passed through a charcoal filter.

2. The usual charge for a careful analysis of water is $5.

Does Reading Affect Digestion?— Liquid — Facial Massage — Sluggish Circulation. — E. C. L., Oregon, writes: "1. I eat my food dry, and while away the time by reading. Will this retard digestion? 2. How much liquid does one require who takes only a moderate amount of exercise? 3. Is facial massage beneficial? 4. Would a dry salt rub at night quicken a poor circulation?"

Ans.— 1. The effect of reading upon digestion will depend upon the degree to which the brain or nervous system is excited. A very considerable degree of thought ought not to do any harm.

2. Two or three pints of water daily.

3. No special general effect could be expected from the application of massage to so small an area as the face, but the face itself would certainly be greatly benefited by the skilful application.

4. Yes.

Pain in the Head.— J. C. G., California, sixty-six years old, does not use tobacco, spirits, or opiates. He writes: "1. There is continual heaviness and numbness in the top of my head, and a continuous ringing in my left ear. I have a feeling of utter collapse. There is enlargement of the stomach. Is there any cure? 2. On which side should one lie when sleeping?"

Ans.— 1. The patient is doubtless suffering from disturbance of the circulation of the brain, the result of dilatation of the stomach. The brain is affected through the sympathetic nervous system. A cure can be effected if the patient can be put under the right conditions and kept there long enough.

2. It is most usual to lie upon the right side, although this is a matter on which no arbitrary rule can be given. It is quite impossible for most persons to maintain during sleep a constant definite position.

Painful Kidney.— F. M. H., Missouri: "1. My left kidney is very sore, and I suffer from acidity of the stomach. What diet shall I follow? 2. What foods shall I avoid? 3. What is my trouble? 4. Will it be injurious for me to take Geneva Lithia Mineral Water?"

Ans.— 1. A dry dietary.

2. Avoid fats, sugar and sweets of all kinds, fermented bread, and mushes.

3. The pain is doubtless due to disturbance of the sympathetic nervous system, probably from prolapse of some abdominal viscera. The kidney itself may be out of place.

4. We are not familiar with this brand of water. So-called lithia waters, as well as many other mineral waters, are generally a snare and a delusion. Recent investigations have shown that lithia will not dissolve calculi, as has been supposed. Not infrequently the amount of lithia contained in water would require the swallowing of a gallon of water to get an ordinary dose, so that the liability of injury from this source is very small.

Salt Glow and Saline Bath — Peanuts — Chestnuts — Corn-Meal Muffins.— Mrs. J. J. G., Tennessee: "1. How should one take a salt glow and saline bath when there is no bath-room in the house? 2. When is the best time of the day to take a warm soap and water bath and salt glow for one having catarrh and weak lungs? 3. What should be the temperature of the water? 4. Is it best after the warm bath and the morning cold bath to rub the body with talcum powder? 5. Are raw peanuts healthful? If not, how should they be cooked? 6. Are chestnuts as healthful as peanuts and almonds? 7. Should they be cooked? 8. Are corn-meal muffins made with eggs, a little milk, and soda as healthful as graham or wheat biscuit made in the same way?"

Ans.— 1. A sheet might be spread upon the floor, a chair placed in the middle of the sheet, and the patient seated in the chair while receiving the treatment.

2. At night, just before going to bed. A cool sponge bath followed by vigorous exercise in the morning is of great service.

3. For an ordinary warm bath, 92° to 98°; a hot bath, 100° to 104°.

4. Talcum powder is not necessary, but will do no harm.

5. No; they should be subjected to long cooking by boiling or steaming.

6. They form almost the sole food of the vast population in Italy, where sturdy young men may be seen making whole meals from a small bagful of chestnuts.

7. Yes. Chestnuts may be cooked either by boiling or roasting.

8. There might be very little difference. The biscuit would be greatly improved by leaving out the soda.

Diet in Obesity.— J. H. P., Colorado, asks how not to be fat.

Ans.— Mild starvation is necessary for a rapid reduction of flesh. One of the best means of accomplishing this is to give the patient a monotonous diet; that is, require him to eat a single article of food. He will soon get so tired of this that he will be very careful not to eat too much. The ration provided might consist of some such simple food as granose, granola, or granuts. In addition to this simple diet, which should be as free as possible from sugar and fat, the patient should take a cold bath daily,— a simple dip in the bath-tub with water at 60°, from one-half to one minute, followed by vigorous exercise.

Catarrh of the Stomach.— C. E. E., Nebraska, asks (1) if the same results can not be obtained by cleansing the stomach by drinking water at frequent intervals and then vomiting, as by lavage of the stomach; and (2) if we advise the morning cold bath in such cases.

Ans.— 1. In cases in which the use of the stomach-tube is really essential, it is generally impossible to wash the organ out by means of drinking. The difficulty is that the stomach is dilated to such a degree that it can not contract properly upon itself and thus fully discharge its contents. Often there are quite deep pouches in the stomach walls, which are filled with liquid; by means of the stomach-tube the whole stomach may be emptied, and thus enabled to contract upon itself.

2. The morning cold bath is especially useful in cases of this sort.

Diet.— E. E. K., Pennsylvania, asks what diet we advise for people with weakened digestion, and uric acid in the system.

Ans.— Dr. Haig has shown the effect of uric acid on the system, and the great prevalence of uric acid poisoning. Weak digestion is often the cause of the development of uric acid in the system. The diet for such a person should consist as largely as possible of fruits, well-toasted grains, and nuts; it should be taken dry. Meat, cheese, and in many cases eggs, even, must be carefully avoided.

Malaria.— E. B., New Jersey, wishes to know what will rid one of malaria.

Ans.— The best measure is the daily cold bath. For the method of applying the cold bath, see the editorial article in this number entitled "The Best Tonic."

Meat.— H. T., Colorado, finds that by discarding meat, he is growing thinner. What food should he substitute?

Ans.— Nuts are a perfect substitute for meat, as they contain fat and albumin in even greater proportion than meat. If nuts in their ordinary state are not readily digestible, there are various nut preparations which are very easily digestible, besides being absolutely pure and far more nourishing than any form of animal food. Buttermilk, kumyss, and such highly nitrogenous foods as peas, beans, and lentils are all valuable as substitutes for meat.

Prolapsed Stomach — Sluggish Circulation — Hot Baths.— M. F. L., West Virginia, asks: "1. How can one determine if he has a prolapsed stomach? 2. What do a dull feeling and much gas after a full meal signify? 3. What causes pain in the 'small' of the back, and in the back of the head? 4. What is the best remedy for impure blood and sluggish circulation? 5. Which is preferable — the hot-air or the vapor bath? 6. How often should a hot bath be taken, and how long should it be continued? 7. Do you recommend the hot bath for obesity, rheumatism, nervousness, and chronic dyspepsia?"

Ans.— 1. Only by examination by a skilled diagnostician. A splashing sound in the stomach when taking exercise after drinking is a frequent indication of dilatation of the stomach. In bad cases of dilatation of the stomach the splashing sound is often heard several hours after eating, even when water has not been swallowed. The sound occurs sometimes in making such slight movements as rocking in an easy chair.

2. Fermentation in the stomach and the formation of poisonous substances which are absorbed into the blood and stupefy the brain and nerves.

3. Indigestion, with disorder of the sympathetic nerves.

4. Make it pure by abundant exercise in the open air, a sweating bath once or twice a week, and the cold or tepid morning bath followed by vigorous rubbing.

5. A hot bath is seldom necessary.

6. A warm bath, 92° to 98°, may be taken to advantage two or three times a week, duration from fifteen to thirty minutes, or even longer. Baths at a temperature near that of the body may be prolonged almost indefinitely.

7. Yes, but not to excess; moderate perspiration, followed by a cold bath and vigorous exercise, produces better effects than a prolonged warm bath. The latter is often so weakening that it becomes necessary to discontinue treatment before definite or permanent effects have been produced. The very cold bath, as a dip for half a minute or one minute in water at 60°, followed by vigorous exercise, is the best hydriatic measure to be employed in obesity. In rheumatism the very hot bath, if not too greatly prolonged, may be employed to advantage. Excellent effects may be produced by a bath from 110° to 115°, for fifteen minutes. Nervousness is best relieved by a bath between 92° and 95° from thirty to forty minutes. In chronic dyspepsia, baths at various temperatures may be employed. As a rule, cold baths are preferable to hot baths in dyspepsia, for the reason that the cold bath stimulates the formation of hydrochloric acid, and invigorates the whole digestive process. In cases in which an excess of hydrochloric acid is formed, the cold bath produces less marked benefit; the hot bath may be used instead, followed by moderate cold applications.

Mushrooms — Swelling of Limbs — Greens — Sassafras Tea — Browned-Wheat Tea.— A. J. B., Pennsylvania: "1. Are mushrooms good for food? If not, why? 2. What causes one's feet and limbs to swell? 3. Are greens healthful? If not, why? 4. Is sassafras tea, also tea made from browned wheat, healthful?"

Ans.— 1. The mushroom is certainly of doubtful value as a food product. It was not included in the original bill of fare given to Adam. Its nutritive value is so exceedingly small that it would scarcely be worth eating, even if there was no objection to its use. It must be acknowledged that it is not easily digestible, and all mushrooms are placed under suspicion from the fact that so large a number of the numerous species are highly poisonous. A person who habitually eats mushrooms is almost certain, sooner or later, to be poisoned by somebody's mistake in gathering the fungi. Mushrooms differ from the great class of food-producing vegetables in that they consume oxygen, and send into the air carbonic acid gas, thus aiding in polluting the atmosphere, as do animals. They thrive only upon masses of decaying vegetable substances, and must partake, to some degree, of the nature of the soil in which they grow. So long as we have such an abundance of luscious fruits and nutritious nuts and grains, it seems that we might easily dispense with the mushroom.

2. There are many causes of swelling of the feet; disease of the heart or the kidneys, and an impoverished state of the blood are the most common causes.

3. Grass was never intended as food for man. Persons with healthy stomachs can eat these grass-like substances, but they are scarcely more than rubbish in the stomach, having little or no nutritive value.

4. Beverages of all sorts are better avoided at meal-time. If one must drink something, a sim-

ple decoction like those referred to may be taken in small quantities without more injury than comes from the use of an unnecessary amount of fluid.

Perspiration — Nervousness.— A. P., Arizona: "1. What remedy would you suggest for obnoxious perspiration of the feet of a child of seven? She uses no meat or stimulants. 2. What is the cause and cure of extreme nervousness in a child of ten who has just recovered from malarial fever?"

Ans.— 1. When putting the child to bed, wrap the feet separately in small linen towels wrung out of cold water, slip over this a thick woolen stocking, lastly wrapping in thick flannel. The compress should remain on all night. In the morning bathe the feet with the hand dipped in cold water.

2. An impoverished state of the system. Daily cold bathing (see "The Best Tonic," in this number) is the best remedy.

Ralston's Breakfast Food—Flour.—C. P. S., Tennessee: "1. Is Ralston's breakfast food wholesome? 2. A miller makes from sixty pounds of wheat about the following grades of flour: Thirty-six pounds of first grade; fourteen pounds of second grade; six pounds of shorts; and four pounds of bran. What proportion of the above mixed would make the best flour for one having indigestion? 3. Does the germ of grains contain the gluten?"

Ans.— 1. We do not recommend mushes of any sort. Kettle cooking is not sufficient to prepare grains for ready digestion and assimilation. Cereal foods should be kept at a temperature sufficiently high to slightly brown the starch, as in zwieback, roasted rice, granose, granola, and crystal wheat.

2. The mixed product representing the whole grain is best for persons suffering from indigestion. The most important thing is to have the grain thoroughly cooked, as above indicated.

3. No; the gluten is found chiefly in regular layers close to the outer cellulose cover, or bran.

Catarrh — Sterilized Food — Cream — Pain in the Head — Eczema — Diet.— Mrs. T. L., Ohio: "1. What prescription would you advise to be used in the Magic Pocket Vaporizer for dry catarrh? 2. Will one starve to death on all sterilized food? 3. Is your reason for heating cream simply to sterilize it, or to render it more digestible? 4. What causes a feeling in the head, when asleep, as if struck by a bullet or by lightning? 5. Why is eczema more troublesome in winter? 6. Will fruit and granola perfectly nourish the body for an indefinite length of time? 7. If so, how much is necessary for a meal?"

Ans.— 1. Oil of eucalyptus and menthol, equal parts.

2. Certainly not. Sterilized food differs from unsterilized food only in the absence of germs. Germs are not necessary for perfect nutrition of the body.

3. The purpose is to sterilize it, as recent observations have shown that cream contains nine tenths of all the germs in the milk.

4. It must be a dream.

5. Possibly it is because of diminished activity of the skin and the accumulation of impurities in the blood. The dryness of the air may possibly, to some degree, act as an irritant; woolen underwear, perhaps, plays a share in exciting irritation of the skin. Linen should be worn next the skin. A warm bath should be taken at night two or three times a week, duration from one-half to one hour, temperature 95°. It is well to dissolve one or two pounds of soda in the water of the full bath.

6. Yes, with the addition of some food containing fat, as nuts or nut products.

7. The body requires about twenty ounces of food a day, of which sixteen ounces, approximately, must be starch, three ounces albumin, and one ounce fat. A pound of granola, half a pound of protose, and three or four pounds of fruit would easily constitute a sustaining diet.

Diet for Canvasser.— A. L., Wisconsin, is a canvasser, and wishes to know what would be a strengthening diet for him.

Ans.— The most strengthening food with which we are acquainted is granuts, which, with the addition of water only, furnishes all the elements necessary for nutrition. Granuts, with a little water and fruit, furnishes a wonderfully strengthening, palatable, and nutritious diet.

Nervous Dyspepsia.— F. C. M., Wisconsin: "1. Are nuttose D and nut butter good for one with nervous dyspepsia? 2. What other foods would you prescribe? 3. Would bananas, dates, and figs be beneficial in my case?"

Ans.—1. Yes, but protose and nuttolene are better.

2. Granola, granose, granuts, zwieback, roasted rice, crystal wheat, fresh fruits of all kinds.

3. Yes.

Complexion — Granola.— H. H. R., Nebraska: "1. What causes small white scales on the face, especially on the forehead? 2. What is the effect of benzoin on the skin? 3. Please give a good lotion for the complexion. 4. Can one make granola at home?"

Ans.— 1. The disease is doubtless parasitic, commonly known as dandruff, and closely resembles eczema; it is probably a mild form of this malady.

2. That of an antiseptic and palliative, sometimes seeming to be very valuable in aiding recovery from skin maladies of various sorts.

3. The best way to get a good complexion is to subsist upon a pure diet of fruits, grains, and nuts, to bathe frequently, and to live out of doors as much as possible. The skin of the face can be attractive and wholesome only when the skin of the whole body is in a healthy state. Cold water is a capital face lotion.

4. Yes, by obtaining the necessary machinery, which is somewhat costly, and by serving an apprenticeship to become familiar with the necessary details, which must be accurately followed. A good substitute can be made by toasting bread in the oven until hard and dry, and then grinding it in a coffee-mill.

Nervousness.— M. E. P., Michigan: "1. My nervousness seems peculiar. When I see a drunken man or hear profane language, a great terror seizes me — the blood seems to leave my body, and my knees almost give way. Can tobacco cause this feeling? 2. Would a course of physical training help me? 3. Do you approve of the Sandow system of training?"

Ans.— 1. No, it is the profanity, but if tobacco is used, it may very likely be a predisposing cause by weakening the nervous system.

2. Yes, doubtless, if tobacco is at once and entirely dispensed with.

3. It appears to produce good results, and is certainly worthy of trial.

Night Sweats — Sprained Wrist — Sanitarium.— J. W. S., Massachusetts: "1. What causes night sweats, leaving the skin yellow? 2. A sprain of the wrist — the triangular ligament — has been bandaged for five months without improvement. Shall the person discontinue typewriting? 3. Will rubbing or any application be beneficial? 4. Is electricity applied by belts useful? 5. Is there a good sanitarium in Boston? 6. If not, where is the nearest one?"

Ans.— 1. There are various causes. One of the most common is tuberculosis, or consumption; another, great constitutional weakness; still other causes, an exhausted state of the nervous system, and indigestion.

2. The joint needs proper treatment, probably more than rest alone.

3. The application of cold water daily, followed by judicious massage, ought to secure improvement.

4. No.

5. We know of none.

6. South Lancaster, Mass.

Milk and Eggs.— B. C., Massachusetts, asks why GOOD HEALTH contains recipes calling for eggs, milk, and buttermilk, when it so strenuously advocates the disuse of meat.

Ans.— Without doubt a choice of food is that obtained exclusively from the vegetable kingdom, — fruits, grains, and nuts. Eggs and milk, however, differ from other animal foods in that they do not contain the waste matter which is found in flesh; at least this is true of milk obtained from healthy animals, and eggs before the process of incubation has begun. Eggs sometimes contain germs, however, and milk, unless sterilized, is always swarming with germs. Buttermilk is preferable to ordinary milk for the reason that it does not form in the stomach the large, tough curds characteristic of common milk, and for the further reason that the presence of lactic acid in the milk prevents the growth of destructive germs, while most of the germs have been removed with the cream in the process of churning. The writer has long discarded the use of milk, eggs, and all other animal products, and with most decided benefit.

Eggs — Enemas.— L. S. Mc D., Iowa, asks (1) if eggs rarely cooked are good for persons having dyspepsia; and (2) if enemas are to be preferred to cathartics.

Ans.— 1. Beaten eggs, taken raw, and slightly cooked eggs are tolerated in some forms of dyspepsia, but as a rule, eggs are not well digested by dyspeptics.

2. Most certainly.

Lemons — Lavage.— H. M. B., Pennsylvania: "1. How many lemons daily can a person with hypopepsia safely use? 2. Can a 'hypo' eat any of the following foods without bad results: macaroni, steamed crystal wheat, browned bread made of crystal wheat, rice pudding, fresh corn, beans, and peas? 3. Do you advise lavage of the stomach once a month?"

Ans.— 1. This must depend somewhat upon the appetite. If there is a craving for lemons, it is safe to satisfy it, for the system calls for what it needs.

2. Yes, unless gastric catarrh is also present, or the stomach greatly affected.

3. No, not as a systematic procedure. Lavage of the stomach should be employed only when the stomach requires washing out. The stomach-tube is greatly abused. When habitually employed, it often injures the stomach, and produces an aggravation of existing disorders.

Deafness.— A. H. S. describes the symptoms of a case of deafness as follows: "The person is

thirty-six years old, a miller, and has worked in considerable dust for several years. He has had nasal catarrh for twenty-five years, but it was only five years ago that the right ear became deaf. The left ear then gave no trouble. Electricity and various remedies have been used in vain. Is there a possibility of a cure in this case?"

Ans.— The patient may perhaps be benefited somewhat, but a perfect cure is altogether improbable. A first-class ear specialist should be consulted,— not a traveling charlatan, but an established aurist.

Coated Tongue — Pie-Crust.— A health seeker in New York asks: "1. Is there any way to clean a coated tongue? 2. Shall I take some alkaline mineral water occasionally? 3. Is pie-crust made of nut butter wholesome?"

Ans.— 1. Yes. A fruit diet, with copious water drinking and the habitual use of dry, thoroughly cooked grains, and nuts will in time effect the removal of the morbid conditions present, to which the coated tongue is due. Improvement of the general vital resistance of the whole body is necessary. See editorial article, "The Best Tonic," in this number.

2. It would probably do no good.

3. Yes, unless the butter is made of roasted peanuts, when it can not be recommended. Nut butter is wholesome only when made of nuts not subjected to the roasting process.

Legumes and Vegetables — Health Foods. — S. A. H., Illinois, asks (1) whether lettuce, radishes, vegetables, spinach, and tomatoes are vegetables or legumes; (2) how long it takes granose, granola, zwieback, and the nut foods to digest.

Ans.— 1. Vegetables.

2. A few ounces of granose taken into the stomach are often found entirely digested and passed into the intestine at the end of one hour, and in most cases at the end of an hour and a half none of the food can be found. The same is true of granola. As regards zwieback, the rapidity with which it digests in the stomach and passes into the intestine depends largely upon the thoroughness with which it has been masticated. All these foods undergo more rapid digestion than ordinary breadstuffs.

Diet for Congestion of the Stomach.— Mrs. S. L. C., Ohio, asks what foods are best for one just recovering from congestion of the stomach.

Ans.— By congestion of the stomach we suppose is meant acute gastritis. In such a case the dietary must be most carefully managed. Buttermilk, or such simple foods as gluten gruel, granose, granola mush, browned rice, crystal wheat, baked sweet apples, or sweet fruit-juices, are the best suited to the case.

Indigestion.— J. A. F., Colorado, enumerates the symptoms of his ailment as follows: "Mucus vomited after every meal; heart failure; enlarged spleen; lower left portion of stomach enlarged, dizzy spells. Do you advise change of climate? I came here from a lower altitude."

Ans.— The patient probably has gastric catarrh. If the enlarged spleen is due to malarial fever, a change of climate would be beneficial. A dry climate at moderate altitude would probably be best suited to the case. The heart failure may be due to exhaustive exercise.

Diet for Teething Children.— E. G. B. Nebraska: "1. What diet is advisable for a teething baby eighteen months old? 2. What amount of bromose, and how frequently, should such a child be fed? 3. What diet would you prescribe for liver trouble?"

Ans.— 1. Granose affords an excellent diet for such a case. Granuts and granola are also excellent.

2. Two or three tablets may be employed at each meal.

3. A diet of fruits, grains, and nuts, or nut preparations in moderation. Fruit-juices should be abundantly used, also predigested cereal foods.

Vertigo.— G. W. M., California: "I am fifty years old. Last winter while making a voyage on the Pacific, I was very seasick, and have since been annoyed by vertigo. I am also troubled with albumin in the urine. What will be beneficial for both difficulties?"

Ans.— You should put yourself at once under the care of a skilled physician in a sanitarium. An excellent institution is located at St. Helena, Cal. Your case is too serious for home management. There must be careful regulation of diet, together with skilful application of baths.

Milk with Fruit.— E. H. R., California: "1. Why is sweet milk with fresh fruits a bad combination? 2. What causes the synovia of the knee to dry up, leaving a chalky deposit around the knee-joints, and causing a grating sound when walking? This trouble is of ten years' standing. The patient has been a vegetarian for seven years, and observes the other health principles."

Ans.— 1. Milk is always apt to sour and decompose in the stomach if it has anything like a fair chance to do so, and fruit is conducive to the fermentative process.

2. This condition most commonly exists in persons subject to rheumatism, sometimes follows injuries, and is occasionally observed as a result of general failure of nutrition, which may be due to neglect of exercise or other abuses quite as readily as to improper diet.

Indigestion — Milk. — C. W., Illinois, writes: "1. What causes a burning sensation in the stomach several hours after eating? 2. In a case of slow digestion would there be any objection to a light lunch of granose or fruit alone at one o'clock, instead of the heaviest meal at noon? 3. What is the remedy for a violent pain in the stomach and bowels, apparently from gas? 4. Is a dry diet best in all cases of hypopepsia? 5. Is there the same objection to cream as to milk? 6. Do you recommend the daily cold bath for women as well as men?"

Ans.— 1. The sensation may be due to hyperpepsia, in which an excess of hydrochloric acid is present.

2. In cases of slow digestion, if a hearty meal is taken late in the afternoon, nothing but fruit should be taken at one o'clock; but the taking of a very hearty meal later than four o'clock is likely to prove injurious.

3. Fomentations over the stomach, and a hot enema.

4. Yes; almost the only exception being where there is extreme irritation of the stomach requiring the temporary employment of a fruit diet.

5. Cream contains more germs than milk, but when sterilized, is more digestible, for the reason that it contains less casein, and hence does not form large, hard curds in the stomach.

6. Yes. See "The Best Tonic," in this number.

Smallpox. — N. L. C., Florida: "1. What should be the hygienic treatment of smallpox? 2. Can one have it more than once? 3. Is vaccination a necessary precaution?"

Ans.— 1. Good nursing; a diet of well-cooked gruel, fruit-juice, and cooked fruits; the prolonged bath at 88°.

2. Numerous cases are on record in which a person has suffered from the disease the second time.

3. There can be no doubt that vaccination lessens, to a considerable degree, the liability to contract smallpox.

Fruits. — T. J. H., Canada: "Are oranges and bananas injurious when one is troubled with acidity of the stomach, nervous prostration, and kidney trouble?"

Ans.— No. The free use of fruits in such a case may prove beneficial. It may be necessary to wash out the stomach once or twice. Avoid combining vegetables and fruits. Dry cereals, fruits, and nuts should produce no inconvenience.

Flesh Eating — Wild Eye-Lashes. — G. T. H., Alabama: "1. How can I answer a flesh eater who says that Christ ate flesh (fish)? 2. What is the cause of and cure for wild eye-lashes?"

Ans.— 1. Do not dispute it. If he asks you to give an explanation, tell him no doubt there is a good explanation, but you are not prepared to give it, neither are you under obligation to do so. Finite man can not be expected to explain everything that God does. Christ wore a long, flowing robe; the modern Christian wears coat and trousers.

2. The most common cause is inflammation of the lids. An operation is necessary for a radical cure.

Bichloride of Mercury Solution. — A. S., Tennessee, asks if a bichloride of mercury solution (1–2000) will cause salivation.

Ans.— Most certainly, if a sufficient quantity is taken internally. Great care should be taken to avoid it. Solutions of mercury are extremely poisonous, and should be so carefully guarded that they can not be swallowed by accident.

Dizziness. — C. P. F., sixty-two years old, inquires the cause of and cure for constant dizziness. He lives very simply, and is otherwise well.

Ans.— The cause may be degeneration of the blood-vessels, or it may be wholly due to indigestion. A thorough investigation of the case should be made, including a careful examination of the heart.

Tuberculosis of the Hip-Joint. — Mrs. E. M. R., Michigan, asks: "1. What is the cause of tuberculosis of the hip-joint? 2. Can a fall or rheumatism induce it?"

Ans.— 1. Tubercular germs.

2. An injury of some sort, as from a fall, is a predisposing cause in the majority of cases.

Fissure of the Anus. — H. T. C., Ontario, asks: "1. What causes the rectum to be so dry as to crack? 2. Can it be cured? 3. What should be done?"

Ans.— 1. Eczema is the probable cause.

2. The diet must be confined to proper food,— fruits, grains, and nuts — granose, protose, granola, and similar preparations.

3. The bowels must be kept regular; parts must be cleansed thoroughly with castile soap and water daily, and should then be painted over with ichthyol. A hot or a hot and cold spray applied to the parts daily is beneficial.

LITERARY NOTICES.

In the November Magazine number of the **Outlook** the strongest feature in the world of politics and history is the authorized interview with Dr. J. G. Schurman, president of the Philippine Commission. Dr. Schurman in this interview talked with considerable freedom, although in some points with the reserve imposed upon him by his official position. This statement of his views is the most authoritative and fullest that has been made public. Another timely article is a sketch of the two military leaders in the Transvaal war, Sir Redvers Buller and General Joubert with excellent portraits of both. In the literary world the best article is that by Augustine Birrell on Samuel Johnson and the Johnson Club, illustrated by quaint and interesting pictures. Industrial and economic interest is afforded by the article on "The Northern Farm," in Mr. Charles B. Spahr's series called "America's Working People." Other illustrated features of note are Mr. William Durban's account of the opening of Siberia by the great Trans-Siberian Railway, which has the title "From Moscow to Vladivostok;" Mr. Clifton Johnson's "The Lakes of Killarney," illustrated by photographs taken by the author; a description of "An English Village Public House," owned and controlled by an English clergyman and commonly known as "The Parson's Public;" and a picturesque account of the life of Bishop Whipple, of Minnesota, based upon his just-published autobiography, and containing a fine portrait. Another biographical feature is a similar account of the life of the distinguished English preacher, Robert W. Dale, which also has a fine portrait. Stories, poems, a sermon by Dr. Greer, together with news and editorial departments, complete a varied and timely number. $3 a year. The Outlook Company, New York.

In a letter written by Mr. Egerton Castle to a friend in New York he says that under the literary phantasy of their garb, all the characters in **Young April,** from the king to the philosopher, are personages who were still living in the middle of this century, men and women whose doings and adventures had in days gone by been recounted to the author by one who had known them all, some of them intimately; namely, by the author's own father. The names of the actors are, however, disguised, the dates suitably altered, and the exact situation of "the Germanic Confederation Kinglets," as the irate guardsman has it, is left vague with a purpose.

Booker T. Washington, whose pre-eminent leadership in the affairs of his race is universally admitted, opens the November **Atlantic** with "The Case of the Negro," one of the most important contributions yet made to this vexed and vital question. His acknowledged position makes him speak as "one having authority," and his words will be eagerly read and studied by all sections of the country. Apropos of the Philippine troubles, Hugh Clifford, British Resident at Pahang, Malay States, contributes a striking and valuable article, "A Lesson from the Malay States," based on the knowledge derived from his long experience among Malay tribes. Charles A. Conant discusses the question, "Can New Openings Be Found for Capital?" showing the wonderful and innumerable changes that have taken place during the present century, which continually demand new and more extended fields for business. For these all the great nations of the world are now in active competition, and those states which withdraw will sentence themselves to the fate of countries like Persia, Turkey, and Spain, and become victims of the greater energy and foresight of more courageous competitors. Prof. Kuno Francke discusses "Goethe's Message to America," which he believes is covered by two conceptions: the idea of freedom and that of culture. Jacob A. Riis continues his tenement series with "Justice for the Boy," showing how the advent of schools and playgrounds changes the street-boy from hoodlumism to good behavior, and how the new education inculcates respect for law,— from which everything else follows for good citizenship. In "The Good Government of an Empire," William Cunningham furnishes a brief, but sharply cut and valuable exposition of the management of great colonial empires, instancing that of Great Britain as contrasted with that of Rome. He points out for American benefit what he conceives to be the duty of the future for all those who believe in the extension of civilization. Bradford Torrey furnishes an appreciative tribute to "The Attitude of Thoreau toward Nature;" how he loved the swamps, the desert, and the wilderness; how true he was to his ideals, and how his work has enriched the world and benefited it.

The Christmas number of **Scribner's** will contain specimens of the most elaborate color printing. One of the schemes is a religious poem illustrated by the first work in color of Walter Appleton Clark. It has been reproduced with a delicacy and faithfulness to the original which has never been surpassed by the magazine.

The November **New Lippincott** contains a complete novel by Mark Lee Luther, a name destined to take a high and permanent place in American fiction. His novel is entitled "The Livery of Honor," and deals with the capture of Burgoyne, and with events in London and Cambridge which surrounded it. Almost a novel in its artistic completeness is "A Landlocked Sailor," by Sarah Orne Jewett, who here shows a new side of her talent in giving the character of as complete and amusing an Irishman as fiction records. This is the first of a series of stories of Irish characters which Miss Jewett has in view, and it possesses all her searching knowledge and lightest humor. "Miss Melissa's Miracle: A Study in Christian Science," a short story by Ellis Meredith, is a diverting and timely tale of a supposed cure by a fair "healer," an explanation, and a happy sequel. "Out of the Deep," by Frances W. Wharton, is a vivid story of a woman's intuition and a man's salvation. Mrs. Campbell Praed's tale, entitled "Karl Sandèze: A Literary Episode," is bright and amusing, an episode likely to happen to any one who lives by the pen. Of admirable papers, skilfully treated, there are the following: "The November Meteors," by Charles A. Young, Professor of Astronomy in Princeton University; "The Last Victory of 'Old Ironsides,'" the third paper on Great Naval Battles, by George Gibbs; "Old Age Pensions from a Socialist's Standpoint," by the Hon. John C. Chase, mayor of Haverhill, Massachusetts; "Bal des Quat's Arts," by W. C. Morrow, a spirited description of the annual Students' Ball in Haris, with illustrations by Cucuel, and "An Unwritten Chapter in our Relations with Spain," by Rev. Francis S. Borton, with an introduction by Henry Charles Lea, LL. D.

With the January number of **Lippincott's** the price of the magazine will be reduced from $3 to $2.50 a year.

A personal study of Admiral Dewey, coming from the pen of a distinguished diplomat, is certain of a wide sale during the fall season. Such a book is **Admiral George Dewey: a Sketch of the Man,** by Hon. John Barrett, former U. S. Minister to Siam. Mr. Barrett spent the ten months succeeding the battle of Manila Bay with Admiral Dewey, and in his narrative gives the first authentic account of Dewey's relations with the Germans, and his negotiations with Aguinaldo. Among the many lives of Dewey it is the one work the authenticity of which can not be questioned. Cloth, ornamental, 16mo, $1.25. Harper & Brothers.

A dainty Christmas book is announced as soon to appear from the press of the Wood Allen Publishing Co. The book will without doubt be a great favorite with the public, for it fills in a most acceptable manner a long-felt need. Fond parents are always anxious to keep a record of the important events of baby's life, his cute sayings and doings. The **Baby's Record** is arranged to meet this demand. On each left-hand page is a poem appropriate to the event to be recorded, and a beautiful illustration. The page opposite is blank, ready for the entry to be made. Every momentous event is prepared for, from the first smile to the first day at school. The book is bound in dainty white, while on the inside cover is a page ready to receive the photograph of king baby, surrounded with a wreath of beautifully printed and embossed forget-me-nots. The book, once seen by baby lovers, can not be resisted. Price, 50 cents. Wood-Allen Pub. Co., Ann Arbor, Mich.

Publishers tell us that a few years ago nearly all the books most in vogue were from the hands of English authors, and that the works of our younger American writers suffered almost complete neglect. The national feeling roused by the recent war with Spain has, however, entirely reversed these conditions, and we are no longer under English tutelage in matters literary. Most of the really successful books of the past two years are by young American authors only recently becoming well known, and some of their new books have reached sales hitherto unprecedented in the annals of the trade. Mr. Winston Churchill's **Richard Carvel** is a case in point, some 200,000 copies having been sold since its first publication in June.

Mrs. Margaret E. Sangster, who for over ten years has been the editor of *Harper's Bazar*, has resigned that position and joined the editorial corps of the **Ladies' Home Journal,** in which magazine she will hereafter conduct a prominent department.

Books and Pamphlets Received.

"The At-One-Ment between God and Man," Vol. V of the Millennial Dawn Series. Paper covers, 507 pages; published by the Watch Tower Bible and Tract Society, Allegheny, Pa.

"The Logic of Vegetarianism," a reprint of lectures that first appeared in the *Vegetarian*, by H. S. Salt. Handsomely bound in cloth, 120 pages. Published by the Ideal Publishing Union, Ltd., 33 Paternoster Row, London, E. C., England.

"Surgical Abuse of the Rectum," by W. C. Brinkerhoff, M. D., Mc Vicar's Theatre Building, Chicago, Ill.

PUBLISHERS' DEPARTMENT.

THE buildings and arrangements of the Sanitarium at Sydney, Australia, have long been insufficient to meet the demands of the patronage of this vigorous young institution under the direction of its popular superintendent, Dr. Edgar Caro. The friends of the institution are making an earnest effort to erect a suitable building, and this will, without doubt, soon be accomplished, as the Battle Creek Sanitarium has donated money to purchase a fine site pleasantly located in a suburb of Sydney, and Mr. John Wessels, the chief patron and promoter of the South African Sanitarium at Claremont, is now in Australia for the purpose of helping to found another splendid establishment equal to the one in South Africa, the existence of which is almost wholly due to the generous gifts made by Mr. Wessels and his brothers, Messrs. Francis and Henry Wessels, his mother, and other family friends. No philanthropic enterprise has ever enjoyed the patronage of more generous and helpful friends than Mr. Wessels and his family have proved. With Mr. Wessels on the spot in Sydney, we feel confident that ways and means will soon be found for the erection of a suitable building upon the site which has been provided.

WE are glad to learn from Dr. Herr, superintendent of the Battle Creek Sanitarium Treatment-Rooms located at Cleveland, Ohio, that he and Mrs. Dr. Herr have received a most cordial welcome from the people of Cleveland, and that their hands are more than filled with work continually. Dr. and Mrs. Herr have had an extensive experience in connection with the Battle Creek Sanitarium and other institutions, and are careful, conscientious, and skilled physicians well worthy of the confidence reposed in them by the people of Cleveland. The institution is admirably fitted for giving treatment of various sorts. Persons who are able to go there for treatment can receive all the forms of rational treatment; as, water-baths, electricity, and massage, administered by skilful and agreeable attendants. Those who are not able to visit the treatment-rooms can receive competent attention at their homes by physicians or nurses.

THE PRESSMEN PLEASED.— The following telegram has been received by Mr. D. Mc Nicoll, assistant general manager of the Canadian Pacific Railway, from Mr. W. S. Dingman, president of the Canadian Press Association: —

"VANCOUVER, Aug. 21, 1899.

"One hundred members of the Canadian Press Association are deeply grateful to the Canadian Pacific Railway Company for the unremitting courtesy and hospitality which has made their trip across the continent the most interesting and pleasant of all their outings. Though conscious of the sterling work accomplished in the spanning of a continent, for a large part remote from settlement, and in the opening up of a territory as vast as some empires, the actual view unfolded on the journey has impressed the excursionists more forcibly than words can represent. The development all along the route, in cities as well as in agricultural and grazing sections, has surprised us, and is most encouraging to lovers of solid progress and hopeful prosperity. The ease and comfort with which the trip from ocean to ocean is attended in the cars and in the C. P. R. hotels, through a service unexcelled anywhere, is a triumph for Canadian skill and enterprise second only to the financial and engineering victories attained in the building of the greatest scenic and developing line in America. W. S. DINGMAN,

"*President Canadian Press Association.*"

FOR SUPPURATION OF THE MIDDLE EAR.

THE patient lies down on the side with the affected ear uppermost. A small quantity of hydrozone, in the proportion of one part of hydrozone to three parts of water, is heated to the temperature of the body, and then gently poured into the ear, a little at a time. As soon as a few drops have entered the ear, effervescence appears; when this stops, it should be wiped out with a little cotton wound around the end of a toothpick, care being taken to cover the end of the toothpick so that it will do no injury to the tissues. More of the solution of hydrozone is then added, and this is continued until all the bubbling ceases. Occasionally the fingers should be pressed upon the tragus in such a way as to close the canal; this will force the liquid well into the middle ear and down into the Eustachian tube, if the passage is open. When the bubbling has entirely ceased, the exterior canal should be packed full of boracic acid; the powder should be put into the canal a few grains at a time, and packed in well by the aid of a toothpick with cotton wound tightly around the end. This will be likely to be softened in a day or two, when it should be washed out, and the whole operation repeated. Two or three weeks' treatment will cure the most obstinate suppurative cases of disease of the middle ear, unless necrosis of the bone is present.

A VERY pleasant mention of the Battle Creek Sanitarium and Hospital is made in the new Michigan Central folder. This railroad is one of the oldest, most thoroughly equipped, and most delightful roads over which to journey, to be found in this country. For luxuriant furnishings, smooth roadbed, and excellent service it is unsurpassed.

ONE thousand five hundred dollars will be given for the best fifteen stories about the remarkable Sorosis shoes now so universally worn by women. First prize, $500.00; second prize, $250.00, etc. This offer is to women only. Send for full particulars to A. E. Little & Co., 67 Blake St., Lynn, Mass.

There is nothing more attractive and helpful to romance than a handsome foot. "Sorosis" as applied to shoes is now a household word, and means all that is best. The knowing one is aware that Sorosis makes her feet look well and feel well.

TO LOS ANGELES AND SOUTHERN CALIFORNIA. — Every Friday night, at 10:35 P. M., a through tourist car for Los Angeles and Southern California leaves the Chicago, Milwaukee & St. Paul Railway Union Passenger Station, Chicago, via Omaha, Colorado Springs, and Salt Lake City, for all points in Colorado, Utah, Nevada, and California. In addition to the regular Pullman porter, each car is accompanied by an intelligent, competent, and courteous "courier," who will attend to the wants of passengers en route. This is an entirely new feature of tourist-car service, and will be appreciated by families or by ladies traveling alone. Particular attention is paid to the care of children, who usually get weary on a long journey. These tourist cars are sleeping-cars supplied with all the accessories necessary to make the journey comfortable and pleasant, and the berth rate (each berth will accommodate two persons) is only $6 from Chicago to California. Ask the nearest ticket agent for a tourist-car folder, or address Harry Mercer, Michigan Pass. Agent, 22 Campus Martius, Detroit, Mich.

NON-TERRITORIAL EXPANSION means paying rent for a poor farm. Now is the time to secure a good farm on the line of the Chicago, Milwaukee & St. Paul Railway in Marinette County, Wisconsin, where the crops are of the best, work plenty, markets fine, climate excellent, water pure and soft, and the land sold cheap and on long time. Why rent a farm when you can buy one for less than you pay for rent? Address C. E. Rollins, Land Agent, 161 La Salle St., Chicago, Ill.

IF you want to be prepared for every emergency, you should add the following books to your library: "Ladies' Guide," "Home Hand-Book," and "The Stomach; Its Disorders and How to Cure Them." A request with your name and address on a postal will secure a catalogue by mail. Address Good Health, Battle Creek, Mich.

FASTER THAN EVER TO CALIFORNIA.—Beginning with Sunday, October 15, the new schedule of the Overland Limited, which leaves Chicago at 6:30 P. M. daily, via the Chicago, Union Pacific & Northwestern Line, was shortened to arrive in San Francisco at 5:15 in the afternoon of the third day, instead of 8:50 P. M., as at present. This train will have two modern double drawing-room sleeping-cars through from Chicago to San Francisco without change, besides a through buffet-, smoking-, and library-car (with barber), and will also have through sleeping-car accommodations to Los Angeles. All meals *à la carte* in dining-cars. Eastbound, the Overland Limited will leave San Francisco at 8:00 A. M., arriving at Chicago at 9:30 the morning of the third day, with the same elegant equipment and through service. There will also be free reclining chair-cars between Chicago and Ogden, Utah, in both directions.

The Pacific Express will continue to leave Chicago at 10:30 P. M. daily, as at present, but the service will be improved by the addition of a through first-class drawing-room sleeping-car between Chicago and San Francisco. There will also be a through tourist sleeping-car for San Francisco, with through sleeping-car accommodations to Los Angeles, every day, and on every Thursday these cars will be personally conducted as a special excursion feature. Returning, these cars will leave San Francisco at 6:30 P. M., and arrive in Chicago at 7:45 the morning of the fourth day.

The Pacific Express will continue to have drawing-room sleeping-cars and free reclining-chair cars

between Chicago and Denver, arriving in Denver at 7:35 the second morning, and which will be returned on train leaving Denver at 10:00 P. M. daily, and arriving in Chicago at 7:45 the second morning.

The Portland Special.— The drawing-room sleeping-car, free reclining-chair-car, and tourist sleeping-car for Portland, Ore., will continue to leave on the Overland Limited at 6:30 P. M., daily, reaching Portland at 6:45 on the evening of the third day; returning, it will leave Portland at 7:00 P. M., daily, arriving in Chicago, as heretofore, at 7:45 A. M., on what will be known as "The Portland Special." Meals *à la carte* will be served in dining-cars in both directions. Buffet-, smoking-, and library-car service, with barber.

The Colorado Special will continue to run on the present schedule between Chicago and Denver, leaving Chicago every morning at 10 o'clock, and requiring only one night en route to Colorado. The same excellent service will also be maintained eastbound.

COMMENCING Dec. 1, the "fast mail" train of the Chicago, Milwaukee & St. Paul railway will leave Milwaukee at 11:45 P. M., arriving at St Paul at 7:55 A. M., connecting there with departing morning trains for the West. This train will carry a sleeping car as well as a combination passenger coach and baggage car.

On the same date train No. 57 will leave Chicago for Milwaukee at 9:55 P. M., carrying a parlor car and combination passenger coach and baggage car. This train arrives at Milwaukee at 11:40 P. M. There are a number of roads whose trains from the East and South arrive at Chicago approximately about 9 P. M., and this new service is instituted primarily for the benefit of their passengers.

MRS. COLUMBIA PAXTON WOOD, of Evansville, Ind., has begun a crusade in the interest of health reform. She urges the organization of the State into a central association with auxiliary branches for the advancement of the public health. Mrs. Wood is trying to arouse public sentiment on the subject by a series of articles on health topics published in the *Journal-News*. She writes the Good Health Publishing Company that she will soon need a supply of their literature.