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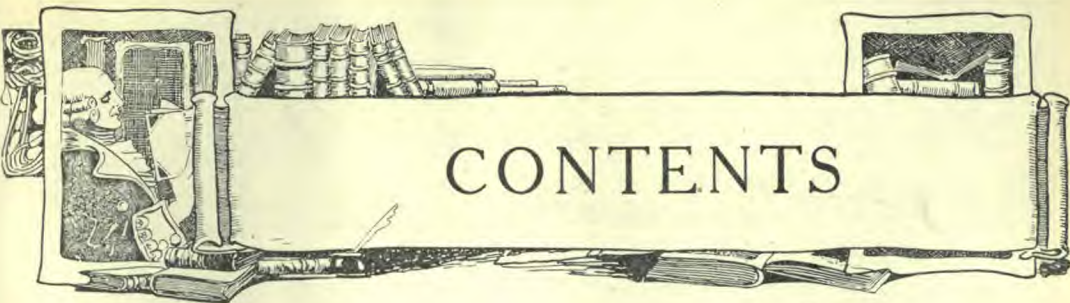
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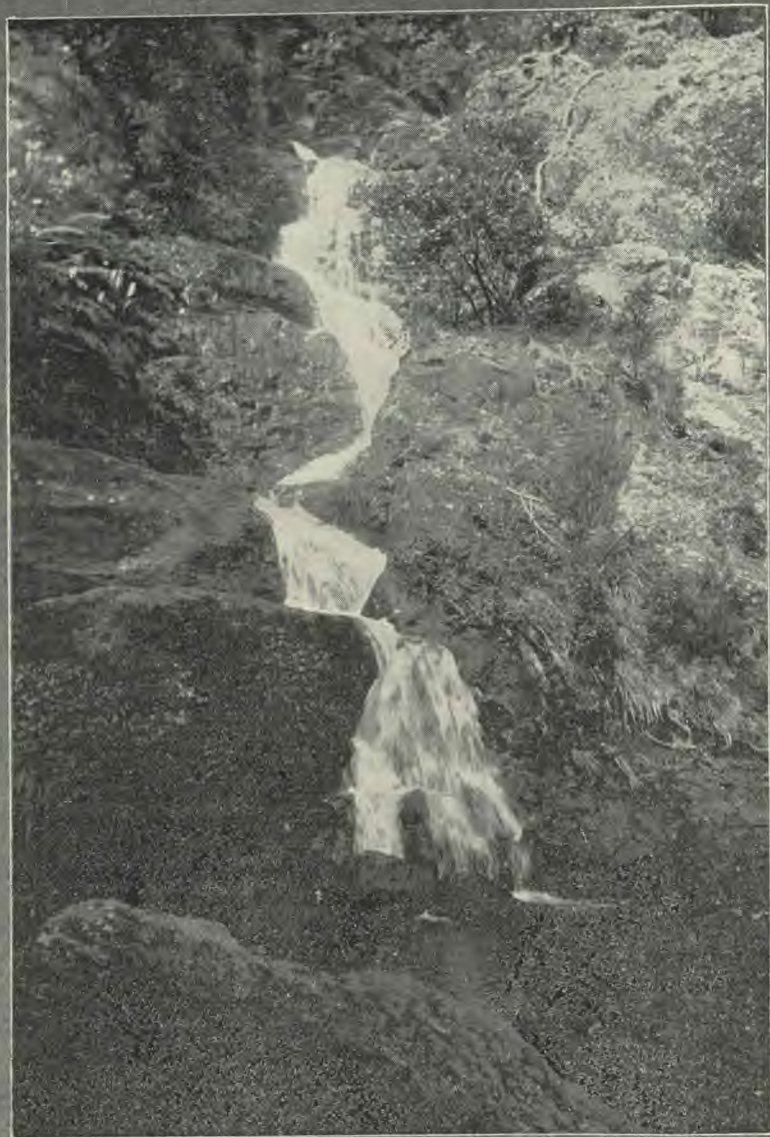
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Waterfall on the Whangaroa Harbour, New Zealand.



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February-March, 1911

Man's Greatest Possession

LIFE is our most valuable possession, and all sane men so regard it. "Skin for skin, yea, all that a man hath will he give for his life."

Although man, because of transgression, received the wages of sin, which is death, God placed such a high estimate on human life that He was willing to risk all heaven for the purpose of redeeming the life which man had forfeited. To save men from eternal death God gave to humanity heaven's most priceless treasure. Could any higher estimate be placed upon the value of human life than this?

Man, to some degree, however, does regard life as his greatest treasure. What will not a man give in exchange for his life? And yet, strange to say, men are willing to barter away their lives for the most trivial things. Some men shorten their lives by at least fifty per cent. by indulging in questionable pleasures, which their own common sense should tell them are pernicious and harmful. Almost everybody shortens life to a greater or less degree by practising some evil habit, while countless multitudes of men are guilty

of robbing themselves of many years of happiness sooner than rid themselves of habits which, like parasites, are not only sucking away their life's blood, but are producing degeneracy in their posterity.

Did men really esteem life at its true value they would not only be willing to rid themselves of any evil habits which sapped their nerve force when they were acquainted of the fact, but they would eagerly search for information concerning the causes of their lack of vitality or the periodic sicknesses which afflict them, and be willing to sacrifice any transitory pleasure in order to prolong life and bequeath health and strength to their offspring.

It is the purpose of this journal to call attention to the importance of preserving life. As individuals, as families, as communities, and as a nation, we should regard the preservation of life and the maintenance of a healthy physique as of the supremest importance. The prosperity and happiness of a nation are measured largely by the mental and physical capacity of the people to perform their daily tasks. As the mental and physical

health of a nation are enhanced or diminished by the obedience of the people to well-known physiological and sanitary laws, it, therefore, becomes the duty of all to acquaint themselves with those natural laws, and to obey them to the letter. The commandment, "Thou shalt not kill," is unwittingly violated by many who would detest to be called man-slayers. Their violations of the sixth commandment are directed against themselves and their offspring. Many of the puny little infants who live but to die, fading away in a few days or months after their birth, owe their premature deaths to some avoidable and unnecessary cause, such as tobacco-using or alcoholism on the part of their parents. It is authoritatively asserted that "there is no vice to which men are addicted, the result of which is more certainly transmitted to posterity than that of tobacco using. A robust man may use tobacco all his life, and [in his own mind] be convinced he is not injured, but the children of that man enter life with a vital organism weaker than would otherwise be the case." But tobacco does injure the man who uses it, notwithstanding all his suppositions and assertions to the contrary, and sooner or later its effects will manifest themselves sufficiently for other people to discern the results of this vice upon his system, even if his beclouded brain fails to detect the effects of the nicotine upon himself.

Degeneracy in Art

It is related of Bernard Shaw that he said while speaking upon the question of health, "The crushing proof that life in the Middle Ages was decenter and cleaner than it is now, is not so much that they produced such wholesomely beautiful things, but that *they didn't smoke*." This is rather hard on tobacco smokers, but there is very serious food for reflection in the thought that art has degenerated. Felix Weingartner, the Vienna orchestral conductor, has just recently uttered the following scathing criticism of modern music in comparison with the unexcelled works of the great masters:—

"The great works of the so-called classical epoch, which in spite of the modern tendencies (perhaps because of them) still are regarded, and justly so, as the promised land of music—all possess the invaluable characteristic of releasing the soul of a highly sensitive listener from the burdens of every-day life, and of dissipating the shadows with their rays of effulgent light. And it is not on account of their familiarity that they exercise this effect upon us, although it is not to be denied that the better we know them, the stronger becomes our desire to make ourselves even better acquainted with them, in order that we may feel more keenly the magic of their life-giving strength. After we know every note, we feel that we must begin all over again, as the most intimate knowledge does not suffice to enable us to penetrate perfectly into their wonderful depths, from which smiles out at us the enigma of eternal youth. *It is just this quality which is so signally lacking in the most recent music.* We are not granted the deep satisfaction for which we continually yearn; we are not offered the refreshing drink which shall wash away the fever of the soul; the windows of the overheated hothouse, in which we are imprisoned, are never opened. We are excited, but not satisfied; heated, but not warmed; carried away but not elevated."

Mr. H. E. Kriebiel, critic of the New York *Tribune*, a few months ago expressed very similar ideas. He says:—

"How small is the proportion of the music given out by the writers of to-day which takes hold upon the popular heart or finds an abiding-place in the popular affections! A study of the programmes of a season's concerts in New York which I made some years ago (there has been no change in conditions since, except that Brahms has died), disclosed that out of 256 miscellaneous pianoforte compositions played (concertos and sonatas being excluded) more than two-thirds were the works of masters of the past; and the remaining one-third included the productions of all living and local composers who in various ways, such as giving concerts of their own works, got their names in the list. The concertos played included practically every work of this class which has maintained itself in the concert-room, thus representing the survival of the fittest of a century's productions. Here is, however, a fact more significant still: sixteen of Beethoven's sonatas were played, a number several times greater than all the sonatas of other composers combined. Obviously, I am not alone in a want of sympathy with latter-day pianoforte compositions; it is shared by the pianists themselves."

In the field of literature also there are those who assert that art is decaying, and one writer in the London *Morning Post* boldly declared that "in the whole field of art we have 'few—if any—whose works will outlive their generation.'"

We do not wish to be understood as attributing the present-day paucity of literati and musical geniuses, and painters, compared with past generations, to the fact that the last generation or two have been addicted to the tobacco habit.

There are other contributing causes which we cannot refer to in this article. But that the use of tobacco tends to destroy the beautiful in life there can be no gain-saying, and that this pernicious vice is responsible for more evil than men are willing to admit there can be no question.

A Hopeful Sign

However, there is one hopeful sign, and that is that the marked deterioration in physique, which has been proved to exist, is spurring many thinking men to ventilate their ideas as to the cause of this race degeneracy. Sanitarians at one time were considered as vexatious and meddling people who ought to be required to leave the business of other people alone. But men are waking up to the fact that an insanitary backyard is not only a menace to the occupier, but may be the breeding-ground of sufficient microbes to decimate the entire community.

War on Slums

The attention which is now being directed towards the better sanitation of cities has had a marked effect upon the death-rate. No city should tolerate slums, for there the death-rate runs as high as forty per 1,000 against a rate as low as nine per 1,000 in open areas. In *Progress* Mr. W. G. Wilkins, J.P., has dealt very ably with the subject of the cost of the slums. The writer wishes to enforce the lesson that wherever the environment of the people affects their physical, mental, and moral development injuriously, the loss is not merely a personal or family one, but a civic and national one. Naturally, Mr. Wilkins lays great stress upon the evidence afforded by the death-rates, national and local; and, taking twelve per 1,000 as "a fair normal one," he points out that if the deaths in England and Wales in 1908 had been at that rate, the number of deaths would have been 97,460 less. As Mr. Wilkins remarks. "If one town was wiped out each year it would startle the nation, but because the total is distributed among the towns, it is hardly noticed."

Healthfulness of Australia

As a nation Australia has the lowest death-rate in the world, which, considering that so much of the continent lies within the tropics, is a tribute to the healthfulness of the open-air life which so many Australians indulge in. Compared with the islands to the north of us our death-rate is extraordinarily low. In Singapore the death-rate is from forty to fifty per 1,000 as against eleven in Australia. If it be true, as Dr. Pearce Kintzing asserts, that fifty per cent. of all deaths are premature and are preventable, then it is possible for Australians to reduce their death-rate to a figure which could not fail to attract the attention of all nations to the healthfulness of this continent.

Although we have a low death-rate compared with other countries, yet we are quite safe in asserting that by adopting better methods of sanitation, and by the judicious care of the health on the part of every individual in the community, we might produce some vital statistics which would astonish the whole world and thus add an additional attraction to the people of over-crowded countries to take up their residence in sunny Australia. A. W. A.

Recreation

LET us play! By "play" I do not mean idleness, but recreation, which naturally must succeed work, if the worker is to be refitted for his task again. Re-create, rejuvenate; the work of one man is the recreation of another.

The printer may enjoy a train journey, while the engine driver will be rested by perusing a book. Almost everyone's play is another man's work; but play must be indulged in by all as regularly as work for the perfect balance of health to be maintained. The bright home circle to many a fagged man is a tonic that acts as nothing else could, and the absence of home or the breaking up of a home, must be contributory very often to the breaking up of health.—*L. Henslowe.*

The Divine Plan for Man's Sustenance

SCRIPTURE teaches that "the invisible things of Him [God] from the creation of the world are clearly seen, being understood by the things that are made, even His eternal power and Godhead; so that they [those who have not the truth as revealed in God's Word] are without excuse: because that, when they knew God, they glorified Him not as God, neither were thankful." Rom. 1: 20, 21. God is revealed in nature, for His creations represent His thoughts; the study of nature will thus necessarily bring us to a knowledge of God, and to the same truths as expressed in His Word. The Word and nature are in absolute harmony, for both are the work of the Divine Mind.

Man was created "in the image and likeness of God;" he was a perfect being, he represented the thought of Deity; in him was no sin, no departure from the law of God, the "commandment that was ordained to life." "God saw everything that He had made, and behold it was very good." In order to maintain this being in his primal perfection the best food was essential. That perfect food was to be obtained from the vegetable world, for we read: "And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." Gen. 1: 29. The lower animal world also had their food portioned out to them: "And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein there is life, I have given every green herb for meat; and it was so."

Nature and the Word are in unison in the teaching of the purposes of God in relation to man's food. Our most eminent comparative anatomists are quite agreed on this point. Baron Cuvier, Sir Richard Owen, F. R. S., Linnæus, Dr. Jeuttner, Dr. Spencer Thompson, and Dr. Alex. Haig, F. R. C. P., among many

others are decidedly of the opinion that man was "originally formed a frugivorous animal." Prof. Charles Bell, F. R. S., states—

"It is, I think, not going too far to say that every fact connected with the human organisation goes to prove that man was originally formed a frugivorous animal. This opinion is principally derived from the formation of his teeth and digestive organs, as well as from the character of his skin and the general structure of his limbs."

Dr. Oldfield, M. R. C. S., L. R. C. P., writes:—

"To-day there is the scientific fact assured that man belongs not to the flesh eaters, but to the fruit eaters. To-day there is the chemical fact in the hands of all, which none can gainsay, that the products of the vegetable kingdom contain all that is necessary for the fullest sustenance of human life."

But many believe in the evolution theory, that man was not primarily created perfect, in the image and likeness of his Creator, but that his perfection will be brought about by slow and gradual changes acting through many generations. The anthropoid ape, from whom they would have us believe man evolved, maintains perfect health and great strength on fruit, grains, and nuts; but he is not a thinking animal. Man, they would have us believe, is gradually developing mental powers, and consequently must obtain his energies from some quieter source, the animal kingdom. In the Melbourne *Argus* of Sept. 3 there is an interesting article entitled "Metchnikoff's Outlook," by Dr. Jamieson (Health Officer, Melbourne), which brings out this view. We will quote from it:—

"His (Metchnikoff's) conclusions have been summarised by him in an article headed 'Medicine is philosophic,' in a recent number of the *Revue de Paris*. He starts by assuming the correctness of the Darwinian doctrine of the development of man out of one of the higher forms of apes; but proceeds to establish it further by an account of the discoveries, in recent years, of what may be regarded as transitions from man as he now is to that simian ancestor; then he proceeds to argue that however it may have been with those remote ancestors, man as we know him, has been badly made by nature. His development has been utterly one-sided, his nervous system having become strengthened and specialised, while his physical system, and, above all, his digestive apparatus, has remained almost unimproved. The result has been the production of a kind of standing contradiction in his being. How this disproportion has arisen Metchnikoff does not attempt to show. . . . But however long it may have been, Metch-

nikoff insists that owing mainly to his more sensitive organisation and his highly developed brain, modern man departed largely from the habits of his remote simian ancestors, whose more direct descendants abound in the world, as oranges, chimpanzees, and others. These animals live entirely on vegetable material, crude and uncooked, while civilised man has adopted a mixed and carefully selected diet, which he prepares for easy digestion by methods of cooking. The result of this is that while he has, unfortunately, retained the digestive apparatus, little

of the organs necessary for the digestion of "monkey-food," and the taking of bacterial products to enable us comfortably to assimilate flesh foods, we will deal with in our next issue. Personally we prefer to live on the foods which Nature so strongly asserts have been divinely portioned out to man. W. H. J.



A Picturesque Nook on the Whangaroa Harbour, N. Z.

altered, of his simian ancestor, he has ceased to need some of it. To the apes a large and complicated intestine, with its dilated blind end, is necessary. For in it rough elements of vegetable food can well be retained to undergo a kind of secondary digestion. In man, with his unbulky diet, with its admixture of animal food, this reservoir is hardly better than a constant source of danger. It might almost be described as a factory for poisons, which are absorbed abundantly, in proportion to the length of time they tarry uselessly in this unfortunate organ, too slow in becoming obsolete. Here we all are, then, with this standing source of discomfort, pain, and disease ever at work.'

The proposal to help on the evolutionary process by operation, the removal

Better Than a Turkish Bath

THE Turkish bath, once held in high esteem, opens the pores of the skin in the most thorough manner, and enables the body to get rid of waste material that clogs the system and invites disease, and were it not for the debilitating effects that have been found to follow this heroic treatment, it would, no doubt, be much more in favour to-day than it is, and more frequently prescribed by physicians than at present. Unfortunately, the

benefit of a Turkish bath is, therefore, very largely limited to persons of robust constitutions.

It will be welcome news then to all, weak and strong alike, that they may obtain all the benefits of a Turkish bath, with none of its drawbacks, in the hot sea-sand bath.

For time out of mind physicians have prescribed bathing in the sea for its tonic effect, and more recently there has been introduced a bath at home in ordinary fresh water with sea-salt added, the sea-salt alone being well known to produce a highly beneficial effect upon the system. But all the health-giving properties contained in the salt water are many times increased in the dry sand of the sea beach; and when this sand, heated over a fire, is applied with a little energy to the body, these properties are forced into the pores much more thoroughly than would be done by a salt-water bath, and the waste material is also brought out of the pores by this vigorous treatment and absorbed by the hot, dry sand.

The writer, who conducts a seaside practice, regards the hot sea-sand rub of great service in the treatment of anæmic patients, and those of low vitality who are always "catching cold," and for sufferers from chronic rheumatism, and much may be expected from the continued use of it in all cases where the blood is loaded with impurities.

About two pailfuls of sand is the quantity required for a treatment. The sand should be made hot in the oven—so hot that it will burn the hands of the attendant unless handled with a little dexterity. A large sheet is spread on the floor, the patient sits upon a low stool in the centre of the sheet; the sand, which has been previously heated in the oven, is now poured out on the sheet, the attendant kneels by the side of the patient, and rubs briskly every part of the body with the hot sand. The sand will feel agreeable to the patient notwithstanding its great heat.

Soon after the treatment is begun, the perspiration, often offensive, breaks out.

The rubbing is continued as long as the sand is hot—usually about half an hour. Every portion of the body is gone over until it is all aglow, then the sand is brushed off, and a little oil of good quality applied by the hands. After this the patient usually goes to sleep, and awakes feeling refreshed and invigorated. This treatment will build up where a Turkish bath will only weaken.

Many persons in seeking to recuperate their health at a seaside resort expect to do so through the oysters and fish that they eat. In the majority of such cases all that is required, probably, is simply to assist nature in her efforts to rid the system of waste products that have been stored away in the body year after year, and for this purpose no better course of treatment could be recommended than the hot sea-sand bath.

A. S.

Colonel Roosevelt on Health Conservation

IT is the prime requisite of every nation to have every man and woman an effective unit. Men can not be effective, they can not be good, unless they are healthy. You public health men are dealing with the basic problem of citizenship. Like other men in public affairs, I am awake to the needs of the public health.

It is necessary to join our efforts for the preservation of the public health. It is important to keep not only the health of the individual, but also to keep the health of the nation.

The question of dealing with the public health is a matter of the last two generations. Fifty years ago nothing was known of the cause and the treatment of diseases which have been a scourge to the human race. About six hundred years ago Europe was desolated by the black death. This disease, which we know how to deal with now, then took off two thirds of the population of Europe.

The savages are now where our forefathers were a few centuries ago. I have just come from a trip to the middle of Africa, where disease ravages mankind as

it did our ancestors. I passed through a desolate region, once densely populated, where the sleeping-sickness has to its credit over two hundred thousand deaths in one neighbourhood.

The advances made during the last half century are incalculable. The work on the Isthmus of Panama could not have been done with even the medical knowledge of a decade ago; for the reason that they could not then grapple with disease as now.—*Exchange*.

Consumption

A Predisposing Cause of Consumption

IF there is one thing more certain than the connection between consumption and bad air, it is the connection between it and alcoholic drink. Whether it be true that poverty is the cause of drunkenness, or drunkenness the cause of poverty, or that both of these statements are true in different degrees, it is provedly true that drink is one of the predisposing causes of consumption.

This statement is not the expression of teetotal fanaticism, glad of the opportunity of "getting a rap" at alcohol. On the contrary, it is the statement of a fact regarding which there is now no gainsay; and "facts," as the Scots have it, "are chieftains that winna ding."

Alcohol fosters the spread of consumption in two ways: (1), by its own special action upon the human body, and (2), by its association with the public-house.

Alcohol and the Human Body

At one time alcohol was believed to be antagonistic to consumption, and to tuberculosis generally. But we now know that this is the very reverse of the truth; that instead of protecting the body it actually predisposes it to the attack of the tubercle bacillus. Its action is that of a depressant of vital energy, with consequent reduction in the normal disease-resistance power of the body, which is thus more vulnerable to disease when under its influence. There is no more

easy prey to any serious illness, such as typhoid fever or pneumonia, or to any severe accident, than the drinker, who will often die when the abstainer will recover from a similar attack; and every hospital surgeon knows the extra risk there is in giving chloroform to an "alcoholic." "The one patient of all others," said Sir Frederick Treves, "that I dreaded to see entering an operating theatre was the drunkard."

The consensus of opinion upon the question of the alcoholic habit specially predisposing to consumption is considerable, and the highest authorities agree that it is one of the most potent factors in the propagation of the disease; not because it begets it, but because it impairs the tissues, making them more suitable soil for the rooting and growth of the bacilli. In fact, there is one variety of consumption of the lungs known to medical men as "alcoholic phthisis;" but, short of this, alcoholism is undoubtedly one of the most prolific predisposing factors in the starting of tuberculosis.

"So far from being antagonistic to tubercular disease, as was at one time supposed," says Professor Sims Woodhead, "alcohol is looked upon as one of the great predisposing factors in its production;" and Professor Brouardel, at the Congress on Tuberculosis, said that "alcoholism is the most potent factor in the propagation of tuberculosis."

Alcohol and Drinking Water

Before leaving this subject, we may allude to the popular fallacy that alcohol kills the disease germs in drinking water; an idea which is a frequent excuse for taking spirits, especially when the water supply is not above suspicion; and the writer has met people abroad who boasted that they never drank water by itself because it was dangerous. The truth is that the alcohol does not destroy the disease germs, and the drinker is thus taking both these and the alcohol.

Consumption and the Public-House

No better breeding-ground can well be conceived than the ordinary public-house.

A veritable hot-bed for the rooting and growth of the tubercle bacillus is it, with its vitiated air, befouled still further by the packing together of all sorts and conditions of people (many of them none too cleanly) into close, ill-ventilated apartments, which often reek with filth upon walls, floors, etc., in the shape of gross expectoration, tubercle-infected sawdust and dirt; the very atmosphere in which the tubercle bacillus flourishes best. One of the results of this association between alcohol and consumption is shown in the very heavy mortality of publicans and their servants from the disease. Dr. Bertillion, the eminent vital statistician, shows that tubercle is twice as prevalent among the liquor-dealers of France as among other shopkeepers. It is into these places, too, that the poor "consumptive" often comes, seeking some solace for his misery. Unwelcome elsewhere, he knows that he can purchase at least temporary toleration of his presence there, so long as he can pay for a drink; and there, too, can he find brightness and warmth, and something of the heat-glow of human companionship—and perhaps a brief spell of forgetfulness—which are denied to him elsewhere. The pity of it is that he often involuntarily contributes his quota to the already heavily-tubercled atmosphere.

The Jews and Consumption

The connection between alcoholism and consumption is also shown in a negative way by the comparative immunity of the Jews from it. In London, for instance, the Jew is less than one-half as "consumptive" as his Gentile neighbour; and the same is true of Manchester, where we find that the mortality of Redbank and Strangeways—the special Jewish districts—is only about half that of the rest of the city; and this, in spite of their dirt, squalor, and general insanitation. The chief reason for this is to be found, not in the superior hygienic environment of the Jew, for he is often a slum-dweller, employed at tailoring, second-hand clothing, or a sweating-shop,

and therefore specially exposed to foul air and tubercle infection; but unlike the Gentile, he does not drink much, if at all, and his tissues are therefore, comparatively, free from the alcohol-depressed, infection-inviting soil.

It is curious to note that the Jew all over the world is sober; and the writer has seen Jews in America, Germany, Russia, Egypt, Morocco, and elsewhere, but never a drunken one.—*By a Physician in the Co-operative News.*

The Song of the Rye

I was made to be eaten, and not to be drank;
To be thrashed in the barn, not soaked in a tank.
I come as a blessing when put through a mill,
As a blight and a curse when run through a still.

Make me up into loaves, and your children are fed;
But if into drink, I'll starve them instead.
In bread, I'm a servant, the eater shall rule;
In drink I am master, the drinker a fool.—Selected.

The Fight Against Leprosy

Good Work by Government Surgeons

LEPROSY, the unconquered scourge of the ages, says the *Springfield Republican*, is making what is believed to be its last stand against science. From Molokai, the coral island prison for lepers* in the Hawaiian group, it is announced that three surgeons of the United States public health and marine hospital service, after months of unremitting toil, have grown lepra bacilli in pure culture, confirming the assertion of Dr. Moses T. Clegg, who declared less than a year ago at Manila that he had found that the bacillus could be cultivated outside the human body.

This achievement of the scientists at the government's leprosy investigation station is the first step in the production of a vaccine or a serum for the cure or prevention of leprosy. Precisely the same ground has been covered by the men who evolved the diphtheria antitoxin and the serum for tetanus.

Laryngitis

LARYNGITIS is an inflammation of the mucous membrane which lines the larynx; a disorder which attacks all ages and conditions of people, but is likely to be more serious in the case of children than in that of adults.

In grown-up people an attack of acute laryngitis is rarely fatal, although its symptoms, which include breathlessness, and sometimes complete loss of voice, often give rise to much alarm. In children the passages are narrower, and they are less able to throw off the secretions, with the result that an attack of laryngitis may become croupous in character, and consequently dangerous to life.

When a child develops a tendency to attacks of laryngitis a thorough examination of the air-passages should be made by a specialist in throat disorders, and in most cases some contraction or chronic inflammation will be found, which calls for correction. The importance of this will be recognised when it is understood by parents that one attack predisposes to others, until the unfortunate child becomes the victim of so-called croup with the least exposure or indiscretion, and all the time the trouble may be caused by the mouth-breathing, which keeps the throat and all the air-passages in a state of irritation and delicacy.

An attack of acute laryngitis in one predisposed to it may be brought on in various ways. Sitting with wet feet will often do the mischief. So will inhaling dust or gas, or getting too cold, or going too long without food, or, in short, doing anything or permitting anything that serves to depress the general vitality; for no organ of the body resents any insult offered to the general system more thoroughly than does an irritable throat.

In the case of adults the trouble is often caused by overuse of the voice. This form is seen in the case of what is known as "clergyman's sore throat," but it is not necessary to be a clergyman to have it, and the average college student

the day after a boat race may be trusted to have acquired a fair case of laryngitis. Sometimes the voice is only hoarse or husky, but in severe cases it may be completely gone, owing to the local thickening and congestion of the parts.—*Youth's Companion*.

Care of the Teeth

THE medical officer of the London County Council (says "Chambers's Journal") has reported, as a result of examinations made at the open-air schools, that out of 240 children attending only fourteen were noted as possessing a perfectly healthy set of teeth; 215 had teeth in need of either extraction or stopping, of which sixty-nine cases were in a condition described as urgent. What are known as tooth-brush clubs, established in certain schools, have stimulated the care of the teeth amongst the young. Dr. J. E. Young, at the conference of the British Dental Association at Liverpool, strongly advocated preventive dentistry, and pointed out that those who neglected the care of the teeth swallowed millions of unhealthy organisms.

Cause of Colds

IN a recent lecture, Sir Frederick Treves gave some sound advice concerning draughts and taking cold. He stated that colds are the result of breathing the air of stuffy rooms, and are not caused by draughts of fresh air. Most scientific men are agreed that the real cause of colds is to be found in infectious germs, and these are always more prevalent in the foul, musty air of a close room than outdoors. But the old opinion that draughts are the direct cause of colds, is still exceedingly prevalent everywhere, and much educational work will have to be done in order to get rid of it.—*Good Health* (London).

The Uselessness of the Flying-machine

THE deadly aeroplane is becoming as proverbial an expression as the deadly dirigible. Horace said the man who first launched his ship on the ocean must have had a heart of oak and triple brass, but all the courage and endurance in the world can not, as far as has appeared, give man one-thousandth part of the control of the air which canvas and steam have given him over the ocean. It is, therefore, very natural that the London papers should be discussing the profitableness or otherwise of airmanship



The Latest Form of Amusement.

in view of the recent killing of Mr. Rolls at Bournemouth and five aeronauts in Germany. A writer who signs himself "Common Sense" sends a letter to the *London Daily Chronicle*, in which he says:—

"Is it worth while that the mind of the people at large should be distracted from the things that do matter by these cheap notorieties—that a splendid young life should be sacrificed to make a Bournemouth holiday? Is it worth while?"

Mr. Arthur Mee, in the same paper, remarks—

"What good can come of an air-ship as big as a steamship, which carries a handful of people and may be dashed to pieces by the tearing of a bit of silk? What good can come of an aeroplane which carries the power of a hundred horses up to the skies but can carry with it no more than two, or perhaps three, men?"

Another eminent publicist and novelist, Mr. Harold Begbie, objects to the air-ship on more general grounds, and declares that "all the present excitement concerning aviation is a palpable and shameful danger to humanity."

An Obscure Cause of Physical Derangement and Its Remedy

FARMER BROWN feels unusually dejected to-day. Indeed for some two or three years past he had not been as bright and cheerful as he once was. His acquaintances have observed his change of spirits, but did not seem to know what to do to mend matters. Their efforts in this direction generally left him worse than before. In his times of despondency his intimate friend would endeavour to encourage him, but Farmer Brown would again be found in the old rut before long. He could never see anything but trouble and financial failure before him.

Dropping in one day when the farmer was busy in his vegetable garden, this friend called his attention to the seeds he was handling, with the wonderful power locked up within the pea and bean to reproduce the future stalk and pods and seeds. He pointed out the almost human intelligence that appeared to be shown by the little feelers of the growing pea to find some object to which they might cling and draw up the vine, soon to be loaded with well-filled pods, away from the ground, upwards, high into the sunlight and air.

The same marvellous powers were also seen in the bean stalk as it grew and twined around and clung tightly to the stick, pressing its tiny burrs with which it is covered into the stick to prevent the stalk from being drawn downwards by its own weight, and straining its way upwards and upwards until it found a support and sufficient accommodation for the future vine.

With a smile he inquired if Farmer Brown worried after he had planted his kidney beans. Had he passed any sleep-

less nights? The farmer could not recall any experience of unusual anxiety or loss of sleep after planting them. Was he not afraid that many of his seeds, after germinating, would come out of the ground the wrong way up? For the first time during the interview the farmer made a feeble effort to smile. Of course he did not worry about it. He simply planted the seeds the best way his experience had taught him, and then left them alone, and Nature took charge of the process of growth; and in every instance, without exception, the root part struck downwards and the stalk part upwards—suggestive of merry schoolboys with their hands upon their knees—forcing their way through the resisting soil with a load of earth upon their backs, into daylight, in response to the impulse placed in the seed on the third day of creation's week. So in life we should discharge its duties with due thought and care and then leave the future, as with the seeds, in the hands of the Lord of the harvest.

His friend well knew that from a business standpoint there was no real ground for his undue anxiety, and urged him to "give to the winds his fears," but expressed his firm belief that his physician would discover the cause of his worrying in some physical derangement that should be attended to without delay.

Farmèr Brown felt strong and well, though often depressed in spirits, but out of regard to the wishes of his friend, decided to have a personal interview with his family physician.

The doctor listened attentively while Farmer Brown related the history of his case and told him the substance of his interview with his friend in the garden and his counsel to get medical advice. The physician's keen eye soon discovered one, perhaps a sufficient cause of his mental state. After making a very thorough examination of the patient, he informed him that on the whole he was in excellent condition, but that there was something wrong at a point where probably he least suspected it. There was

good reason for his habitual despondency,—that important part of the digestive system placed at its very commencement—HIS TEETH were at fault! He must consult a dentist immediately. Some teeth were missing, others had been allowed to decay, exposing the nerves, and making the proper mastication of food too painful. So the food was bolted or washed down into the stomach to remain there an indigestible mass, setting up fermentation and imposing a great burden on the liver and kidneys and loading down the body with poisons that would eventually end in very serious complications.

Before leaving the consulting room, Farmer Brown understood the relation between the state of his teeth and his depressed spirits, and soon braced himself up for an interview with the dentist.

Farmer Brown is now a different man, and he no longer looks as if he had the care of a nation resting on his shoulders. He is different in appearance, different in spirits, and different in many other ways.

A. S.

Fear of the Hospital

IN cities and large towns the hospital, says the *Literary Digest*, is now generally recognised, at least among educated persons, as a useful public institution, the natural place of resort in severe illness or in case an operation is to be performed. It is understood that care and skilled attention are possible there, far better than what could be given to the patient at his own home. Yet beyond the radius of influence of one of these modern houses of rest and cure, the old unreasoning fear of the hospital still remains—a relic of the days when limbs were amputated without anæsthetics amid unsanitary surroundings. Moreover, it is often felt that to be sent to a hospital is in some degree a disgrace. The causes of this feeling and the remedies for it were recently discussed by Dr. A. H. Thayer, in an article published in *The International Hospital Record*. Says Dr. Thayer:—

"The question naturally arises, Is this fear a reasonable one, or does it come from the fact that when a patient from any of the small villages goes to a hospital it is the 'talk of the town?' Should that patient die while in the hospital every one in the village knows about it and talks about it much more than they would had he died in his own home. 'He died in the hospital.' The question does not occur to them, did he undergo an operation, or did he die of some condition that had already progressed so far that no operation could be performed? The fact to them is, 'He was taken to the hospital and died there, and I am not going there to die.' The same thought is many times expressed as follows, 'They took him to the hospital and operated on him and that killed him.' Of course it is considered that the operation was the direct cause of death, even in the case of an inoperable carcinoma in which an exploratory was done without perceptible effect on the patient's strength, and it was the original disease that eventually caused the death.

"This is an argument against doing ever so slight an operation on a hopeless case. If the patient dies, other people hear of it and fear a necessary operation, no matter how simple it may be or how free from danger. In the minds of the public, all operations are serious, and most patients are supposed to die who undergo them. . . .

"Among city people, or people who are frequently about the hospital, there is much less fear of an operation. They see the ninety-nine cases that regain their health as well as hear of the one that died.

"Is the time ever coming when the public will know that it is seldom the operation of itself that causes death? The cause of most cases of death is the fact that the disease has been allowed to progress too far before they will consent to an operation. Had the operation not been delayed because of needless fear until the patient or his friends could see that the patient would surely die unless

operated upon, then operations could be performed with a much lower mortality and with much better prospects of the patient regaining perfect health."

From an examination of the records of his own hospital, which he believes well represents the average, Dr. Thayer finds that the mortality rate following operation is low—not higher than 5 per cent.

The fear of the hospital on this score is therefore not justified, and it should be remembered that if all the hospital operations had been performed at the patient's own homes, without hospital facilities and hospital comforts, the mortality would undoubtedly have been far greater.

Benefits of an Increased Tax on Spirits

MANY reports have come from England that the increase in the tax on spirituous liquors, made last year, has been followed by a marked decrease in the consumption of whisky and brandy. Mr. Lloyd-George has recently given his official indorsement to these reports. He said that there were three reasons for the decline in consumption. The Conservative was indignant that the tax on whisky had been raised by a Radical government, and therefore declined to buy it. The Radical was indignant because the publican had raised the price, and he refused to pay the increase, and drank beer instead. But the chief reason for the falling off of ten million gallons in the annual consumption was the inability of the consumer to pay the higher price made necessary by the higher tax. These consumers have discovered that they can get along without whisky, and Mr. Lloyd-George hopes that they will continue to go without it, and that the decrease in the number of arrests for drunkenness in Ireland and Scotland, which has followed the falling off in the consumption of whisky, may continue.

NOTHING that is great is easy.—*Ruskin.*

Alcohol

AS to the necessity of alcohol as a factor in regard to the maintenance of the body, in what is recognised as perfect health, one must without any bias accept the decisions based upon experience. This experience may be that of some learned scientist, who, with knitted brows, has toiled arduously for years over complicated experiments with this universal substance upon protoplasm and animal organisms. Or the experience may be that of some close observing statistician, who annually reports columns of facts bearing upon crime, disease, insanity, and deaths resulting from the use and abuse of alcohol. It may be the experience of those individuals whose business and domestic welfares have been sadly marred, either by their own addiction, or the misfortunes of some near friends or relatives, attributable to alcohol. Many other varied experiences may be cited. But from the summation of all these experiences and authoritative opinions, what conclusion can be drawn as to the utility of alcohol in the human body in any form whatever?

Scientifically, alcohol is considered a definite substance, a pure spirit containing only carbon, hydrogen, and oxygen in combination, and obtained by fermentation of grain principally. Commonly speaking, however, the term applies to all intoxicating liquors, whether it be beer, wine, or whisky, etc. It is in this latter sense that the present subject is under discussion.

Let us revert our attention to some opinions of eminent men of no small recognition, emphasised for our admonition:

In a lecture delivered at Cambridge by Dr. G. Sims Woodhead in 1903, this gentleman said: "It has long been a bone of contention, not only amongst the laity, but also amongst medical men, as to what dose of alcohol should be considered a moderate and sufficient daily quantity. It is a curious and significant fact that

the more the matter is gone into, and the more fully the question is discussed, the smaller becomes the allowance. Not long ago a couple of ounces was looked upon as the amount that could safely be taken by those who wished to take it in moderation. That minimum has gradually been cut down, and now in a report issued by the German Society against the use of intoxicating drinks, and contributed to by physicians, pathologists, physiologists, and hygienists of Switzerland and Germany, Fraenkel of Halle, the editor, states that one to one and one-quarter ounces of alcohol per day is probably a harmless quantity, but the regular use of even this quantity is, he says, not to be commended. Alcohol in any form, as brandy, wine, or beer, and even in relatively small amounts, is a poison to the human body. *If alcohol has an effect at all of a strengthening or nourishing kind (which is doubtful), it is only to a very limited extent, and is of no practical importance.*"* Moreover, he says the only truly moderate man, or one entitled to call himself so, is he who does not take spirituous liquors every day, drinking his wine or his beer, but partaking of it only occasionally, and even then within the above described limits. Max Grüber, successor to Pettenkofer as Professor of Hygiene, in the University of Munich, goes, perhaps, even further than Fraenkel, and records his opinion in the following terms: "*I find there are absolutely no scientific grounds for indicating a given amount of alcohol as harmless and a matter of indifference if it is given habitually. On the contrary, it seems to me to be in the highest degree probable that the regular use of a much smaller amount than 1-1½ ounces (the amount mentioned by Fraenkel) does harm to the vast majority of mankind.*" To anyone who has come in contact with the pathologists and hygienists of Germany during the last few years nothing is more striking than their attitude on the alcohol question. In many cases they are not what we call pledged abstainers, but they are

* Italics ours.—ED.

exceedingly abstemious men, and, as I know from personal experience, go for periods of weeks and months without taking alcohol in any form, certain of them making it a definite practice to abstain entirely from alcoholic beverages during the periods of the year in which they are doing their work. With the social customs of their country they do not abstain completely on festive occasions, but they will tell you that they look upon the harm that they then receive as a price they have to pay for their participation in social functions."

It is a recognised fact that alcohol is year by year less used by the medical profession, but this cannot be said of the general public. Such an insidious poison as it is, even in the minutest quantities, that the greatest danger lies in the fallacy that moderate amounts are beneficial. Socially and commercially it is about the greatest evil to be contended with. In the military and athletic world it is the same. Sir Fredk. Treves, surgeon to the King, tells us that—

"No man dreams of going into training and taking alcohol; it is impossible. It has some stimulating effect, it is true—that is an unfortunate side of it; but that effect lasts only for a moment, and after it has passed away the capacity for work falls enormously. Alcohol brings up the whole of the reserve forces of the body and throws them into action, with the result that when they are used up there is nothing to fall back upon. The effect of alcohol is precisely like a general on the battle-field throwing the bulk of his army into the fray, and then bringing up as fast as he can every reserve force he has got and throwing them in also. The immediate effect may be impressive, but the inevitable result is obvious. Alcohol, therefore, dissipates rather than conserves bodily energy.

"As a work producer it is exceedingly extravagant, and like other extravagant measures is apt to lead to physical bankruptcy. It is a curious but well-known fact that troops cannot march on alcohol.

I was with the relief column that moved on to Ladysmith, and of course it was an extremely hot and trying time, the temperature often being as much as 105 deg. in the shade. In that enormous column of thirty thousand men the first who dropped out were not the tall or the short, the thin or the fat men, but those who drank, and they came out as clearly as if they had been labelled with a big letter on their backs; so that alcohol, anyhow, in a matter of that sort, is impossible."

Summing up the great mass of evidence that exists on both sides of the question, the verdict against the rôle of alcohol in all phases of life is decisive. The existence of the enormous amount of moral, physical, and intellectual shipwreck caused by it throughout the world justifies all efforts of temperance propagandas. Sir Victor Horsley, the distinguished nerve specialist of England, said:—

"That even dietetic quantities of alcohol produce change in the nervous system is, established on corroborative evidence, not, I think, to be disputed. That the change is a harmful one is equally clear. It is the part of the scientist I think to demonstrate this; but it is the part of the politician to persuade the nation to accept it, and to act upon it accordingly."

A.V.H.

Death to Germs

PROF. H. CAREL of the university of Minnesota claims to have discovered a chemical that will revolutionise the present treatment of disease. He says that it is eight times as powerful as carbolic acid, not poisonous, and death to all germs. The professor says that he is perfectly willing to submit to cholera infection to prove the disease can be cured by his chemical. He claims that it will be a great thing for purifying infected drinking water, as one drop will make any water safe to drink. Bacteriologists who have investigated the matter report that their tests have proved many of Prof Carel's claims.

A National Peril

THE deadliest perils which threaten both Australia and New Zealand, says the editor of the *Southern Cross*, are not from without, but from within. Not foreign enemies, but domestic vice, is that which we have most reason to fear—lust of pleasure, loss of reverence, decay of Christian faith, the sense that we can do without the Sabbath and without the Bible—if not without God. These evil forces, it cannot be denied, touch too many lives amongst us. One sure sign of evil is the shrinkage of the family, and a New Zealand poet, Mr. Tregear, publishes some verses, entitled “The White Peril,” which are of an arresting quality. There was, according to the official figures, a fall in the birth-rate of New Zealand from forty-one per 1,000 in 1876 to twenty-seven per 1,000 in 1906, with a decline in the daily attendance at the Dunedin schools from 4,148 in 1887 to 2,882 in 1907. In 1910 there were 1,258 fewer young people under twenty-one engaged in New Zealand industries than in the previous year. These are very significant figures, and Mr. Tregear

translates their warning into very effective verse :—

Peril is here! is here! Here in the Children's
Land
Life sits high in the Chair of Fools twisting her
ropes of sand ;
Here the lisping of babies and cooing of mothers
cease ;
Here the Man and Woman fail, and only the
flocks increase.

Axes may bite in the forest, Science harness the
streams,
Railway and dock be builded—all in a Land of
Dreams.
Sunk in spiritual torpor, ye flout these words of
the wise :
“Only to music of children's songs shall the walls
of a Nation rise.”

THE poets' salon of Paris is waging a little campaign in what it is pleased to term æsthetic sociology that has already borne some fruit and has great promise. Alexander Mercereau, the secretary of the organisation, says that the desire is to have the windows of every working girls' room in Paris gay with flower-boxes and birds and the interior walls hung with good pictures. Already 1500 such window-boxes are in place, and many artists are giving prints, sketches, and little drawings to the cause.





Grassy meadows, clear, flowing streams and shady trees conduce to healthy cattle

The Need for Milk Supervision

By George Henry Heald, M.D.

THERE is a crying need everywhere for stringent milk supervision. The facts are these:—

1. Milk is a most important article of diet.

2. It is especially necessary for that part of the population, the infants, most dependent for health on a pure food supply.

3. Milk is frequently a means of transmitting disease, for one or more of the following reasons:—

(a) The cow is diseased.

(b) The milker is diseased.

(c) One of the men who handle the milk is diseased.

(d) The cow shed and the dairy house are insanitary and unclean.

(e) The cows are unclean.

(f) The milkman has on dirty clothing, has unwashed hands, and milks in a careless manner.

(g) The milk is put into receptacles not properly cleansed.

(h) The milk is allowed to remain warm, so that the rapid growth of bacteria is favoured.

These are only part of the mishaps to the consumer. In fact, it is only by the utmost care at every step that contamination and disease can be effectually prevented. To one who has not studied the subject, the rules prescribed by the milk commissions for the sanitary production of milk would seem to be sheer nonsense. Yet bacteriological count and other tests show that the foregoing rules are none too stringent. Let us look squarely at the facts: tuberculosis is alarmingly prevalent in dairy herds, and when present, the bacillus finds its way into the milk pail. Though there is some question whether adults are very susceptible to tuberculosis infection from milk, there can be no reasonable doubt that infants not infrequently suffer from such infection.

Typhoid epidemics are not rarely traced to a milk supply. Other infectious diseases have been found to have a like origin. Diarrhoeal diseases of infants, which in summer are responsible for a frightful infant mortality, are traced quite largely to an impure and unclean milk supply.

Could we by any means insure that all milk used as human food would be free



Not many dairies are situated amongst such favourable surroundings as this one.

from disease and dirt, there would be an immediate and very marked lessening of mortality, especially among the very young.

Perhaps if all dairymen could be trained from early age to appreciate the value of cleanliness,—surgical cleanliness,—if they all could be inspired with a pride similar to that of the modern housekeeper, in all that pertains to the handling of animals and the milk, we might have a different product from what we now have.

What is most needed now is a healthy public sentiment in favour of clean, healthy milk.

Mental Medicine

By Harry Granison Hill

HEALTH is not the most desirable possession we have, but it is nearly so. Without health our minds fail to accept the universe's challenge to the reason. Without health we cannot be agreeable companions, efficient workers, clear thinkers, moral models, or spiritual forces. We must all agree that the unhealthy man falls short of what he should be, and to just such a degree he is a failure and not a success. To just such a degree he fails to fill up the full-orbed, well-rounded completeness it is his privilege and his destiny to attain. The highest type of manhood exists only when we have a fine mind and soul in a healthy body. The state of the body affects the condition of the mind. The state of mind affects the condition of the body. Of the truth of these two statements, there can no longer be any doubt. The falling body feeds no uplifted mind. The falling state of mind leads a stumbling body.

The man who wants to be well can do more for himself than we have hitherto imagined. Our wills play a larger and more important role than we have been accustomed to ascribe to them.

The best way to have health is never to lose it. The best way to get health is never to get without it. The best way to be well is to stay well. No one would question that the man who has lived a clean, moral life is better than one who has transgressed and reformed. No amount of repentance can restore to guiltlessness. The bird with the broken pinion never soars so high again. How can we doubt that the body that has preserved its health is, other things being equal, better than the one which has been abnormal and apparently completely recovered? An aged friend of ours recently quoted these wise words, which we quote as worthy and to the point we are trying to establish:—

“If we would take as good care of our good health as we do of our bad health, we would have more of the former and less of the latter. We place our good

health in a draught, and allow it to get its feet wet. We infringe upon its sleep time, and gorge it with unsuitable food at unseasonable hours. We squeeze it with tight clothing. We load it with nerve-racking cares and duties, and reply to its frantic appeals for rest, ‘We haven’t time.’ We distract its ears with noise, and its lungs with bad air. We put our bad health in a quiet room, on a soft couch. We robe it with a comfortable gown. We give it pure air. We put ice to its head and hot water to its feet. We feed it with selected food. We take away all care and responsibility. We give it soothing draughts, and pay a doctor his fee to come and leave it a scrap of paper and tell it that it will be better to-morrow. One might think we prefer bad health to good health.”

Here is a philosophy that is both striking and worth while. It is best to treat good health as a guest of whom you are fond and would have abide with you continually. It will remain gladly if the simple laws of nature are observed. Our bodies must be well fed but not over-fed; well nourished, not over-loaded with waste material in which there is much dross and little real food. Reasonable exercise, regularity of habits, and cleanliness complete the list of a few necessities requisite to perfect healthfulness. The demands of our body are few and simple; but all must be fulfilled. To break the law in one point is to risk it in all.

After we have taken the ordinary care for our bodies, the best thing for us to do is to think very little about them. The individual who makes his body his first care morning, noon, and night, is apt to coddle and protect and over-care for his health until the body becomes a sort of hothouse creature which is wholly unprepared for the rough winds, hot suns, extremes of temperature, and various other severities which come to all persons, and should be easily withstood by all. We may give our bodies too much thought and attention. Take little thought of health after you have treated the body well.

The truth expressed in the well known words, "As a man thinketh, so is he," does not stop short of the healthfulness of the body. We are not to be slaves to our bodies, but we are to be the masters and make our bodies our willing servants. Houses reflect in innumerable ways the life of their tenants; so do our bodies display the unseen and hidden workings of our minds and characters. A healthful mind and a clean, wholesome moral nature will be reflected in a body that must partake of the same nature. Many barren bodies would be fruitful of all good if they were but irrigated with love and purity and good will and justice and the well known but vital virtues that make up good character.

A man once went to a noted educator and asked him: "What is the use of all this torment and care and training of childhood, and all this trouble taken by teachers? Why do you not just let the child grow up?" The teacher was at a loss for an answer; but he said, "I went home and asked my dog the very same question. The dog is very wise, and he put his head on one side and replied: 'Well, I will tell you just how the matter stands: they took pains and time to educate you because it requires twenty-one years to make a man; but I became a dog very soon after I was a pup.'" While that is a simple story, it contains a valuable truth. It takes time to do anything that is worth while; but the things of small value are quickly and easily accomplished. We take time to amass wealth, acquire an education, learn a trade, or become proficient in a profession. Let it be said with emphasis that the person who desires good health must give some time and attention to the end in view. We cannot overcome in a day or a night what we have been bringing on ourselves by years of ignorance, neglect, or transgression of nature's laws.

If you have poor health, it is not wise to depend upon the physician alone; you must co-operate with him. Quit all bad habits. Habits are closely associated

with health. Make restitution. Forget hate, and forsake plans for revenge. Be at peace with your fellow-men. Cast out all fear. Do not worry. Be confident. Be of good cheer. Be cheerful. Think no evil. Desire the good. If these things be in you abundantly you cannot fail to be benefited. Let us not be fanatical and depend upon these terse rules for all our recovery or restoration; but to all the other means we employ, let us add these, and the will to be well cannot fail in its accomplishment, at least to a marked degree.

Disinfecting Railway Cars

A GERMAN engineer has solved the difficult problem of sterilising a railway-carriage quickly, thoroughly, and inexpensively, without taking out fittings and hangings. It is easily understood that cars may readily be carriers of disease germs, and of more repulsive, if less dangerous vermin. The German carriages, returned from Russia, are often in filthy condition. By the newly devised plan, each is run into a specially constructed steel cylinder, at the Potsdam shops, sealed in, and heated by steam coils to 140 degrees Fahrenheit. Air is then pumped out until such a vacuum is formed within the cylinder that water will boil in it at that temperature. Thus all moisture is evaporated from the car without injury from great heat. For special purposes of disinfection the cylinder is then filled with formaldehyde gas, which kills all insect and germ life in the car. In twenty-four hours the car is again ready for service.—*Youth's Companion*.

FOR years physical causes of disease have received attention. Latterly, the pendulum has swung the other way, and many are looking to the mind as the one cause of disease, and the one means of cure. A rational view considers both body and mind as acting together in the causation of both health and disease.

The Inspiration of Consecrated Lives

By David Paulson, M.D.

THE life that has been consecrated to some noble purpose possesses a power over other lives that is *almost* irresistible. A certain poet has well said:—

“Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time.”

I want to call your attention to a few inspiring examples of those who have dedicated and consecrated their lives so that their fellow-men might reap the benefits of the medical discoveries that modern times have made possible.

The Father of Pasteur Institute.

At the head of this list I place Louis Pasteur, the father of modern scientific medicine. In his youth he prayed that God might grant that by his persevering labours something might be added to our knowledge of the deep mysteries of life and death. He said later in life that he did not believe there were any idle prayers, and the result of his work is a brilliant testimony of that fact.

All through his great life he bowed before a Power that was greater than human power saying, “Blessed is he who carries within himself a God and an ideal and who obeys it.” He felt that this was the *spring* of great thoughts and great actions, that one who was in this attitude reflected light from the Infinite.

At the age of forty-six, when in the very midst of his most brilliant discoveries, he had a stroke of paralysis and afterwards repeated strokes. Yet for twenty-seven years with this great physical handicap he developed and made plain the cause of puerperal fever, he banished pus from every up-to-date hospital, he robbed hydrophobia of its terror, and the inspiration of his great work led the civilised world to arise and by generous gifts rear the great Pasteur Institute.

When its doors were flung open amid the applause of the world's greatest men Pasteur was too feeble to read his own address. In it were these pathetic words of a man who had fought a good fight, who had kept his faith, and who had finished his course:—

“Alas! mine is the bitter grief that I enter it, a man ‘vanquished by Time,’ deprived of my masters, even of my companions in the struggle, but I have at least the consolation of believing that all that we struggled for together will not perish. The pupils here share our scientific faith.”

His prophecy proved true, for the Pasteur Institute has become a centre from which scientific missionaries have gone forth to grapple with diseases in every clime. It was a band of these health missionaries who first plunged into the interior of Africa to untangle if possible the mysteries of the sleeping sickness.

The Yellow Fever Conquered

More recently a similar inspiring figure has been produced in America. I refer to Dr. Walter Reid. For twenty years before his great discovery he constantly prayed that he might live to accomplish some great good for humanity, and by the way, my friends, God is still in the business of answering *that kind* of prayers.

His great conquest of yellow fever is too recent to need to be spoken of here, but I will quote what Dr. Howard Kelly wrote concerning this heroic man:—

“The inspiration of Reid's life lies to me in the fact that, though a man of war, he ravaged no distant lands, he destroyed no tens of thousands to make his reputation, but by quiet methods, when there was no strife, he saved countless lives and swept away a hideous plague which from time immemorial had periodically visited our shores, devastated

our fair land, and too often snatched from the years of peace and plenty all their blessings."

I cannot further forbear in this same connection to speak of Dr. Ricketts, who recently died in Mexico. There was something peculiarly charming about this brilliant young man. I never had the privilege that some of our men have had of sitting in his classes, but merely to hear him read a paper or give a lecture was in itself an inspiration, probably because of the consciousness that it was the result of *genuine* effort.

Instead of spending his vacations in ease and comfort at some summer resort, he would be off in the wilds of the Rocky Mountains studying the mountain fever at its sources. This spring he became impressed to study the deadly typhus fever of Mexico, and while in the most ardent pursuit of the cause of this disease, when he seemed to have almost traced this deadly enemy to its lair, it struck back at him with its poisonous fangs, and he himself contracted this virulent disease. Worn down by incessant labour he was unable to resist its inroads, and so in a strange land and amid strangers he laid down his life, a martyr to the advancement of modern medical science.

One other medical man that I want to call your attention to is Dr. Trudeau. A quarter of a century ago when an attack of consumption virtually meant a death sentence, he had just emerged from medical school and found himself a victim

of this disease. At the advice of Dr. Loomis he dragged himself into the mountain region surrounding Saranac Lake, N.Y. He spent the summer there, and then amidst the loneliness of the forest solitude he built himself a little cabin and determined to stay there the long winter. By spring he was much improved.

Other sufferers, hearing of his improvement in health, followed his example. He became a sort of medical leader to them, and they also built cabins. Little by little by patient, persevering, scientific effort he laid the foundation for the modern treatment of tuberculosis. When his work was fairly well established his little humble laboratory was burned to the ground, but refusing to be crushed by this loss he patiently set to work, repaired the damage and began anew. To-day his work has grown into a veritable tubercular city. The idea has spread to the remotest hamlet of the land, and Dr. Trudeau has been spared all these many years to see thousands of lives snatched from untimely graves as a result of his work.

Modern Heroes

Some one said to Phillip Brooks, "How I wish I had lived in *your time* so that I might have had a chance to do some heroic thing," and the old man answered with something of the fire of his youth, "Young man, you are living in my time and God's time. There never was such a chance to do heroic things as *now*."



Prevention of Dengue Fever

The Mosquito Again Found Guilty

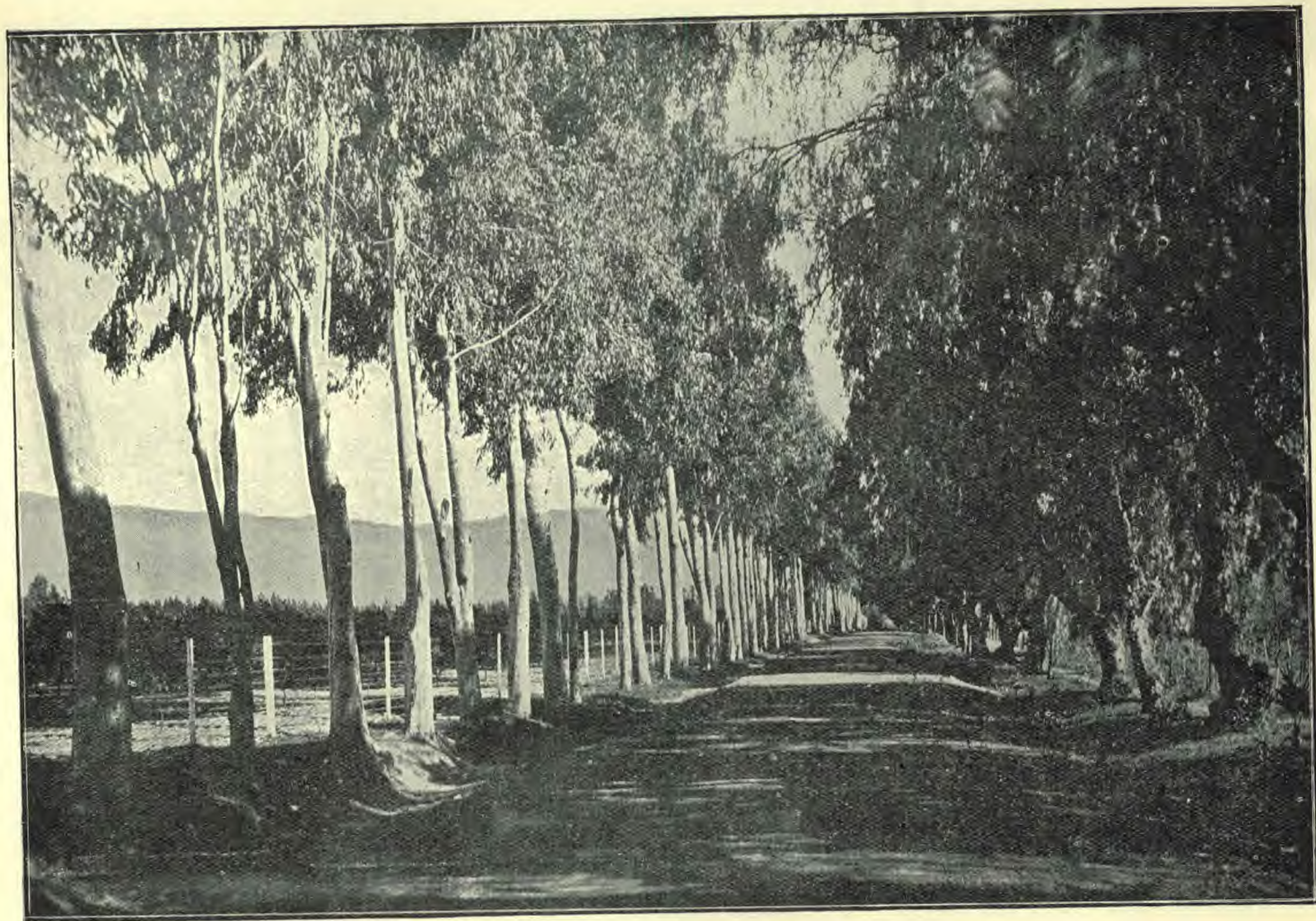
It has been repeatedly proven, and is now quite generally known, that certain species of mosquitoes are the carriers of yellow fever and malaria. Quite as well-established but less widely known is the fact that the common domestic mosquito, *Culex fatigans*, is responsible for epidemics of dengue, or dengue fever, as this disease is best called. An important paper by Dr. E. H. Ross (M.R.C.S., Eng., L.R.C.P., London, Medical Officer of Health at Port Said), which was recently issued by the Liverpool School of Tropical Medicine, gives a most interesting account of how the house mosquito was found guilty of spreading dengue fever in Port Said. Dr. Ross writes as follows:—

“Egypt has always been subject to periodical epidemics of dengue or dandy fever. In some of the towns the disease seems to be endemic, but sudden outbreaks occur which spread all over the country. The disease presents the same characteristics as in other parts of the world, and rarely gives rise to much difficulty in diagnosis. During epidemics the classical symptoms are very evident, including the pains, the apyretic period, and the rashes, which are sufficient to differentiate it from influenza. When pandemics of the disease occur in Egypt every town is invariably attacked, and few people escape. The death-rate, however, is very small as noticed elsewhere, though the debility and cardiac depression following an attack occasionally account for the sudden deaths of a few individuals who before were healthy. Since the discovery of the means of transmission of malarial fevers it has been suggested by various writers that dengue fever is also conveyed from the sick to the healthy by the mosquito. Apparently Graham, of Beyrout, was the first to bring forward strong evidence of this, and he named *Culex fatigans* (the common domestic mosquito) as the culprit. Since that date further and conclusive evidence

has been brought forward to support this statement.

“Dengue fever used to be very prevalent in Port Said, as in other parts of Egypt, up to the year 1905. An epidemic of the disease occurred in the town during the summer of 1904 and in the spring of 1905. This epidemic was part of an infection of all the towns of Egypt, and was most severe. The hospitals were full of cases, and patients actually contracted the disease in them. In Port Said almost everyone suffered from an attack, and the place was regarded as fever-stricken and unhealthy. The town was full of mosquitoes, including two species of *Anopheles* (the malaria mosquito), *Culex fatigans*, and *Stegomyia* (the yellow fever mosquito), in abundance. These mosquitoes were breeding in cesspools under the houses, in basement cellars flooded with sewage, garden fountains, barrels containing water, and were a veritable pest day and night, summer and winter.

“In May, 1906, a campaign against mosquitoes was instituted in the town as a general sanitary measure, with funds subscribed by the Egyptian Government and the Suez Canal Company, the support of Prince d'Arenberg, president of the Canal Company, and Sir Horace Pinching, late director-general of the Egyptian Public Health Department, having been obtained. Two mosquito brigades were formed, one for the European and one for the native quarters of the town, and the oiling of all stagnant water practised once every week. Cesspools were rebuilt, and cellars filled up, with the result that within three months the mosquitoes were reduced to a negligible quantity, and mosquito nets largely dispensed with. Now, after two years, mosquitoes have become so rare in the town that they can be ignored, and malaria, though never very prevalent, has completely disappeared. But *dengue fever has disappeared also*, no case having been treated in Port Said since July, 1906. During the early part of that year, before the mosquito work began, dengue fever made its appearance as usual. Thirteen cases were treated in the hospital



A California Road Planted with Australian Eucalyptus and Pepper Trees.

Eucalypts are appreciated outside of Australia.—Ed.]

alone during April and May, and then as the mosquitoes disappeared the disease stopped, and has not recurred since. In September, 1906, a severe epidemic raged throughout Egypt, beginning at Assouan, and running rife in Cairo and Alexandria. It appeared in all the other towns, but Port Said and Ismailia remained free from it, no case occurring in either place. During the autumn of 1907 it again passed through Cairo and other parts of Egypt, but again Ismailia and Port Said escaped. Formerly the wards of the hospital in this town were full of cases of 'fever' during the summer months, but now the beds are used for other cases, which no longer contract fever, although the mosquito nets have been removed. The extinction of the mosquito is greatly simplified in Egyptian towns owing to the dry summers, and the results can be easily watched. Port Said has a population of 56,000 and Ismailia 10,000. The cost of the mosquito work in the former is 6d. per head of population per year, while in the latter town it is nearly 1s. 6d. per head, owing to the extensive irrigation works which have to be regularly dealt with."

It will thus be seen that the prevention of dengue fever lies in the extermination of the common domestic mosquito. While not a very fatal disease, dengue fever causes much misery in warm climates, and epidemics interfere greatly with trade. The experience of Port Said, therefore, should stimulate dengue-stricken districts to organise mosquito brigades, and through these to do away with this preventable and unnecessary nuisance.

F. C. R.

The Nervous Heart

THERE are many forms of so-called functional heart troubles in which no organic disorder is present, and the sufferer's life is not menaced or shortened, and yet which give rise to the most acute discomfort and dread; for it is hard to convince the average man who is con-

scious of some abnormality in the action of his heart that he is not in danger of sudden death. A nervous or irritable heart may manifest itself in a variety of unpleasant ways. Of these, palpitation is one of the most unpleasant. Of course palpitation of the heart is a symptom of most forms of serious heart disease, but it can, and often does, occur in an otherwise perfectly healthy heart, and is recognised as one of the most frequent forms of heart neurosis, or nervousness of the heart.

Palpitations may be brought about by a variety of causes. Any sudden emotion, especially that of intense fear, may cause an attack, as may also some forms of indigestion, particularly when associated with the formation of gas on the stomach. It is also often found in conjunction with an anemic condition, and especially in that form of anemia called chlorosis, which affects young girls.

Sometimes palpitations of the heart are easily cured, and sometimes they are very persistent, but they do not of themselves threaten life.

Tachycardia, or rapid heart-beat, and bradycardia, or slow heart, are also forms of nervous heart trouble. In taking account of very rapid or a very slow pulse it must always be remembered that the personal equation comes in. Some persons have normally a heart action that in others would be abnormal. Napoleon is a well-known instance of normal bradycardia. His physician records the fact that the emperor's pulse averaged only forty beats to the minute.

The neurasthenic heart is recognised because it accompanies a general neurasthenic state. The patient is likely to be irritable and fidgety, and often suffers from insomnia and other neurasthenic symptoms.

In this form, as indeed in all the forms of nervous heart trouble, the treatment must be directed rather to a building up of the general condition, than to the treating of the heart muscle alone. Everything that tones up the general system also tones up the heart. The

life should be regular, quiet, and prudent. Especial care should be taken not to overtax the digestive powers, and overwork in any direction should be checked.

This is also true in the cases of irritable heart, so often found among young people, especially young men, who have been overdoing in athletic work.—*Youth's Companion*.

A Germless Oyster (?)

UNDER present conditions, says a writer in *The Hospital* (London), the only oyster-eater who is safe from an attack of fever is he who happens to have been immunised by a previous attack. He goes on to say:—

“It is ridiculous to allow the public to eat oysters produced under such conditions in an age when no one would dream of drinking unboiled water collected from a badly constructed well. A fortune awaits the man who succeeds in constructing oyster-beds guaranteed free from infection, and in order to be able to do this the dirty soft water which the oyster needs for fattening purposes must be freed from typhoid and cholera germs. It may, by the help of ultraviolet rays or of ozone, be found possible to effect this at small cost, or even, may be, by the employment of better water or of that which has been exposed to sunlight for several days. Once done, it would be a simple matter to guard against carelessness on the part of middlemen.”

A much safer plan to follow would be to avoid the use of oysters altogether.

Prevention of the Spread of Contagious Diseases

MANY children complain of not being well, and yet present no definite nor distinctive symptoms; in fact, a layman probably would not recognise them if they were present, and these are the cases that are sent away to school under the impression on the part of the parents that

the ailment is merely a temporary one, brought about, probably, by some internal disturbance, and which a dose of castor-oil or nitre will clear up speedily. Many children, we know, are prone to complain to their parents that they are not well simply as an excuse to stay away from school, and we need not wonder that the doting mothers are often deceived, and insist upon an ailing child continuing at school, on general principles.

A day or two elapses, and the child is too sick to get out of bed; the family physician is hurriedly called, and he pronounces the case one of scarlet fever, diphtheria, or some like contagious disease. The health department is notified; quarantine is instituted; and the teacher receives a message to the effect that the child is taken with a contagious disease. The other children are immediately dismissed for the day, and the room or rooms are thoroughly fumigated.

The teacher then breathes freely, thinking, probably, that all danger from the case is past; whereas, in many cases, such is far from being the case. The disease micro-organisms have already secured a foothold on new and fertile ground, and instead of the trouble being over, it is only just begun, all due to the parents' lack of appreciation of the fact that possibly the child was developing some contagious disease, and should be kept at home and isolated from the very beginning, on general principles.—*American Journal of Public Hygiene*.

WALKING twenty-five miles a day, and keeping it up daily month after month, is a physical undertaking of which few people would think themselves capable. Yet a little computation the other day by a restaurant waitress in a large city showed that this is her daily achievement, as well as that of her associates. It is because the average housekeeper does so much walking that physicians pronounce housework one of the best forms of physical exercise for women.

The Chief Cause of Disease

By George D. Ballou.

THE seven things which constitute the basis of nature on this earth are sunlight, air, water, food, clothing (protection from the elements), exercise, and rest. These seven things are the essentials to all life and health. They include everything in nature and art which may be legitimately used to preserve and restore health.

Adverse Mental Conditions.

Confidence and love and trust and rest and peace developed in all their fulness, bring all blessings. The opposite states of mind,—doubt, unbelief, fear, disappointment, wrath, anger, hatred, envy, jealousy, care, anxiety, worry, remorse, grief, agony, despair, pride, and lust, and such like,—are death-producing agencies. Every base thing in the world springs out of this mental soil. Sudden fear or disappointment or a fit of wrath or jealousy, has prostrated many a person for days, making him thoroughly sick. Sometimes these sudden shocks cost the life or dethrone the reason. When one or more of these states of mind prevail for a long time the vital energy is so diminished, so devoured by them, that there is not enough energy left to keep the body in running order, and the consequence is, the breathing is cut short, the appetite fails, the bodily functions become deranged, insomnia ensues, and real sickness or chronic miserableness becomes the heritage of the sufferer. Anger is a murderer. Worry kills more people than work. Pride lays many low through false ideals in dress. And lust is slaying its thousands.

This waste of energy might be likened to the leaks in a mill flume, where so much water is lost on the way that not enough is left to turn the wheel at the end of the flume.

Mental Unrest

The writer is not alone in saying that nine tenths of all the ills flesh is heir to are due to these adverse mental causes. If the reader sees this point clearly, the way is open for a full appreciation of what follows. Mental unrest leads to a misuse, or a miserable use, of the other essentials of life, and this makes it by far the most damaging of any cause of illness. It is the first point at which man gets out of harmony with his environment. When he loses self-control he is broken up all around.

The Remedy

The most natural way in the world to relieve trouble is to remove the cause; sometimes the cause is immovable; then move the patient. Above all remove the doubt, fear, and anxiety. Cause the anger, wrath, malice, and envyings to cease. Deny pride and lust.

How may this be accomplished?—By restoring confidence, rest, and peace, and mental and moral courage. There are various means employed by men; any system of diversion; through mental pre-occupation, by means of faith and hope, through curiosity, or change of scenery or circumstances, or by appealing to the innate love of the wonderful and marvellous mysticism, or by satisfying the mind with some promise of a soon-to-be-filled desire, or by cultivating mirthfulness, or by leading the mind out into the study of the works of God in nature. Anything whatever that will change the current of thought and put away these old, depressing, death-dealing causes, will bring cure to about nine-tenths of all human ills. Perhaps not in every case; for some cases may have gone too far to get relief without surgery, or medical aid, and some, perhaps, may be beyond all help simply through violation of the law

of rest. We should not forget that surgery is a scientific application of the law of rest. Not one tenth of the attention has been given to mental therapeutics (mind cure) that should have been. The application of the law of rest, it will thus be seen, lies at the foundation of the subject of hygiene.

Bee Stings for Rheumatism

THIS is an old remedy, says an exchange, one which has been recommended, off and on, for years, perhaps for generations. It has never been very favourably received by the profession, perhaps for several reasons. One is that it is a remedy not very likely to be popular with the patient. Another is that no remedy which is so simple that persons can apply it themselves without going to a physician is ever likely to have very much favour with physicians.

Every once in a while, however, some physician reports excellent results from this treatment. The most recent appears in the London *Lancet*. Doctor Maberly, a physician having degrees from several colleges, reports his experience with bees in old chronic cases of rheumatism that have resisted treatment by other remedies—cases of neuritis, stiffened joints, chronic rheumatism, following rheumatic fever, and cases following influenza. Though the remedy did not always produce a complete cure, it gave remarkable relief, even in cases in which other remedies had been absolutely valueless. He recommends beginning with six stings, increasing to perhaps two dozen. The treatment may be repeated every day, or two or three times a week, until the desired result is obtained.

The writer has been incidentally taking the bee-sting cure for a long time. It has been involuntary, so far as he has been concerned, the treatment being prescribed by the bees themselves. Whether it has acted as a preventive of rheumatism in his case or not, he cannot say. It is

usually not administered in homœopathic doses, and certainly ought to cure "that tired feeling," even if it accomplishes nothing else.

Radium as a Cancer Cure

DR LOUIS WICKHAM and Dr. J. Degrais write in the *Contemporary Review* on radium, its use in cancer and in other diseases. It is employed in two ways: the salts of radium are dissolved in liquids, which are injected into the circulation or the tissues, are given by the mouth, or are inhaled, or else instruments containing a salt of radium are applied to the tissues. For superficial and slightly malignant cancers of the skin, so often found in old people, radium is the best treatment, nearly always curing them, and with the simplest technique. In the majority of superficial cases, the writers have succeeded in getting good results. An enormous cancer, extending over the temple and forehead, stretching fifteen by seven or eight centimetres, which could not have been severed by knife, was gradually circumscribed. A cancer in the cheek, eleven centimetres wide, nine centimetres long, projecting five centimetres, from which the patient would have died in two or three months, was treated by the introduction of tubes of radium, and by external application over opposite areas. In five months the swelling fell to the level of the surrounding parts, and only two little hard nodules remained. The patient is still under treatment. In three months a case of sarcoma that involved the whole front of the shoulder has been reduced. Similar cures have been effected in cancers of the lower part of the intestine, at the opening of the stomach into the intestine, in the larynx, the gullet, the deeper pelvic organs, the breast, below the jaw, and neck of the bladder. The conclusion of the writers is that radium well employed is in some definite cases a decidedly new help against cancer.



Doctor Air.

There's Dr. Blister, Dr. Bleed, and old-fashioned Dr. Pill,
Who with his mixtures, potions, draughts, will cure your every ill;
And Dr. Sanitation will with wonder make you stare;
But the king of all the doctors, new or old, is Dr. Air.

No nauseous drugs does he prescribe our illnesses to cure,
His medicine's elemental, tonic, wholesome, sweet, and pure;
His services professional to each and all are free—
For Nature's own physician ne'er exacts reward or fee.

No horse nor carriage he requires, he neither walks nor rides,
But floats on pinions vaporous, from woods and green hill-sides,
Where golden sunbeams glint and dance among the pretty flowers,
To the music of clear, purling brooks, and birds in leafy bowers.

He voyages across the sea, whose breath ozonic clings
About his vesture as he flies, with healing on his wings.
For men and women stricken sore by dire disease or pain
He bears the balm that's sanative, and bringeth back again

The roses to the pallid cheek, the sparkle to the eye,
Infusing strength—nay, life itself—in sick humanity.
What purblind folly 'tis for men to poison and pollute
This true elixir vitæ with their chemicals and soot;

Transforming heaven's own ether pure into mephitic gas,
Destroying precious health, and blighting trees and flowers and grass.
How long will Mammon worshippers befoul our precious store
Of vitalising oxygen, and 'gainst it shut their door?

By oxygen we live and move, deprived of it we die:
Thus is the life of earth-born man related to the sky.
Then who would healthy, happy be, must daily have a care
To quaff a copious draught of life-inspiring Dr. Air.

—J. JOHNSTON, M.D., in *Musa Medica*.



The Home Nurse: Her Qualifications and Her Equipment

ILLNESS usually comes to the most favoured home at some time or other. Were it always possible to obtain the services of a trained nurse there would be little or no need of the home nurse, but as it is, the care of the sick one usually falls upon some member of the family. It could not be expected that the home nurse would deport herself as a full-fledged trained nurse, but there are certain qualifications which are as essential to the home nurse as to her hospital sister.

The home nurse must love her work, and must be whole-souled in her endeavour to win the sick one back to health. No matter how worried or anxious she may be, she must always have a smiling face when she enters the sick room. A patient who is hanging between life and death may be greatly cheered by a smiling face, or equally depressed by a desponding one. Quietly spoken (not whispered) words and a gentle touch are also soothing to the sufferer. A shrill or loud-voiced woman who jars the patient's bed, rattles the dishes, and knocks the furniture about, has no place in the sick room.

The home nurse must have physical strength and endurance, especially as she may be required to perform a number of household duties in addition to her at-

tendance upon the sick. In case of a long and serious illness, the nurse should, if possible, have relief at stated intervals, so that she may avail herself of necessary rest and refreshment. It is a false idea of devotion which leads the nurse to remain by the patient's bedside by day and by night without proper intervals for rest and recuperation. If the nurse can absent herself from her patient for only a half-hour, she can do no better than to enjoy a bath and a full change of clothing. Under no circumstances should the nurse make known to her patient the fact that she is weary. Such knowledge is likely to grieve the sick one and counteract to some extent the good effects of any treatments which may be given.

Another qualification which is absolutely indispensable to the home nurse is intellect. A nurse without brains is no acquisition in the sick room. The successful nurse is able to think and act quickly; to understand and execute the doctor's orders; to observe the patient closely, and to record these observations accurately. The nurse who forgets to give her patients the medicine or treatment at the specified time, is likely to be unobservant of even serious changes in the condition of the sufferer. It is indeed a serious thing for one who is dangerously

ill to be entrusted to the care of a person of the "easy-go-lucky" type. The nurse should also be able to draw upon an exhaustive fund of tact. Sick folk are proverbially impatient and crotchety, and unless the nurse is calm, good-natured, and tactful, little difficulties may arise which will seriously interfere with the progress of the patient. If the patient



be a young child, it is particularly important that the nurse be tactful and resourceful.

And lastly, the home nurse should be cleanly both as to her own person and as to the care of her patient. A sweet-faced woman with her hair neatly brushed, clean teeth, a fresh collar, a neat wash-

dress, a white apron, and tidy finger-nails, is always welcome in the sick room; but a slovenly, untidy woman—never. While the nurse should keep her patient's room sweet and clean, there should be no display of brooms, dust pans, dust cloths, and such like. The resourceful nurse will find ways of cleaning her patient's room without making dust or undue disturbance.

And now we must consider briefly the equipment of the home nurse. This consists not of a multiplicity of drugs, but of a few simple remedies which may with a little skill be advantageously employed in all cases of ordinary illness. These remedies should, if possible, be kept together in a suitable chest or cupboard so that in case of sudden illness they may be found in readiness. The home emergency cupboard should contain the following:—

A fever thermometer, a bath thermometer, a complete fountain enema outfit, a hot water-bottle, a pair of fomentation flannels (each consisting of a

square yard of blanket flannel), a friction mit, pieces of flannel and calico or linen for various compresses, a few roller bandages, a pair of scissors, a supply of safety pins, cotton, and needles, pure vaseline, olive oil, eucalyptus oil, salt, cascara tablets or extract, Epsom salts, boracic acid, ammonia, and lysol, or some other reliable disinfectant. In addition to these things it is well also to provide a piece of rubber sheeting to protect the bed, a sitz-tub, a foot-tub, a bed-pan or slipper, and an invalid's drinking-cup.

Having provided herself with the necessary outfit, the home nurse must now learn how to use the various articles properly. For instance, the fever thermometer is a mysterious little instrument which gives most important information to the intelligent nurse, but which is absolutely worthless to the person who is ignorant of its use. Again, a hot water bottle is a joy and comfort only so long as it holds the hot water. As soon as the rubber begins to perish and the water to soak the bed, the hot water bottle becomes a thing of the past. Thus the home nurse must learn how to care for water bottles and other rubber goods. In our next issue we hope to consider briefly some of these practical things relating to home nursing. E. S. R.

Home Treatments

By. Mrs. A. F. Haines

THE human body is a wonderful machine. Man was the crowning act of God's creation. The Psalmist says: "I am wonderfully made." This human machine, if properly cared for, ought to run a century with ease. The body is priceless. If a man buys a costly and delicate machine, he has a specialist to operate it, because repairs are costly and delays expensive. If a mere machine is worthy of a specialist's care, how much more our bodies! How much misery and pain might be avoided! yea, how many good men now mouldering in the dust might be living, acting, happy agents of blessing to humanity if only they had known

how to care for this most wonderful of all inventions, the human body!

It is very important that everyone should know something of the structure, needs, and care of the body. To neglect this knowledge is to invite disease, pain, suffering, disability, and even premature death.

The sins of negligence or ignorance do not stop with the ones who commit them, but are transmitted to succeeding generations; and these must suffer, groan, and cry over the sins of the fathers. Nature is inexorable in her laws. For every violation she invokes her penalty. Sometimes the stroke of justice is delayed for years. She soothes, heals, and repairs the wounds and bruises inflicted upon her; but all the while she is drawing from the reserve force of the body to do so.

We should study what to eat, and how to make right food combinations. Do not eat between meals. The stomach needs rest. Learn how to clothe the body properly. All skirts should be suspended from the shoulders by means of a waist or suspenders. The constant



Wringing Fomentation.

weight pulling upon the stomach, drags it out of place, its walls become relaxed, and dilation results. The organs of the upper part of the abdominal cavity being pulled down on the organs lying next beneath them, lead to prolapsus of the organs.

We are sorry to see men following the injurious fashion of wearing tight belts, with no suspenders to support the trousers.

If people could only be induced to ignore the fashions, when these conflict with health principles, put away the corset and all its substitutes, tight belts, etc., etc., they would have much better health.

Long skirts are injurious, as they get damp or wet around the bottom and keep the ankles and feet damp, which is

very injurious, and besides this they gather germs and filth from the street.

We need sleep and plenty of it. It rests, refreshes, and restores the nerve cells. Nothing will exhaust the system like loss of sleep. "One will die much sooner from loss of sleep than from absence of food."

The average adult requires eight hours of sleep daily, and will find himself stronger and healthier if he takes that amount.



Placing in Dry Cloth.

The Fomentation

is one of the best and most effective ways of applying moist heat to the body. Four good fomentation cloths can be made by quartering a blanket which is part wool and part cotton. Every home ought to have a set always ready to be used. These will save many a doctor's bill and much suffering. If you do not have these, use old woollen cloths or turkish towels. Have ready a pail of boiling water. It is best to keep a pan or a kettle on the fire all the time filled with boiling water. The cloth is folded three times, then dipped into the water, wetting all but the ends. Keep these dry, and twist the two ends in opposite directions until it is twisted as tightly as possible, then pull out, and twist again. In this manner it can be wrung very dry. Fold in a dry cloth, and apply to the body. When first applied there should be two or three thicknesses of the dry woollen cloth under the wet one. As the patient becomes accustomed to the heat, unfold, leaving the dry cloth thinner. In treating children, old people, or paralysed patients place the hand under the cloth to make sure that it is not too hot. Keep raising the cloth enough to let the air under so it will not burn.

The skin should always be red when the treatment is finished. For tonic

effect they should be given fifteen minutes, and be changed every four to five minutes; making three changes. When given to relieve pain, they may be continued much longer, in fact, until the pain is stopped. From thirty to sixty minutes will be long enough to stop any ordinary pain. On removing the fomentations, bathe the surface quickly with cold water, taking precautions to avoid getting the bedding wet.

Backache

So many people suffer from backache, we are glad that this aggravating pain may frequently be relieved by the use of fomentations. Fold the fomentation cloth narrow and extend it from the base of the brain to the coccyx, or a broad fomentation cloth laid across the hips gives the greatest relief.

Indigestion

Stomach-ache and pains in the abdomen caused by indigestion can be relieved by applying fomentations to the abdomen. Cover the abdomen well and proceed as in other treatments.

Sore Throat and Pharyngitis

Apply the fomentations from fifteen to thirty minutes, and after bathing the neck with cold water, apply a cold compress, prepared as follows:—

Fold a piece of soft, thin cloth two or three inches wide and with two thicknesses. Wring out of cold water and wrap around the neck. Over this wrap a dry flannel cloth, taking care that the dry cloth covers the moist one all around, and fasten securely and snugly. This compress should be worn during the night, and on removing it in the morning the neck should be bathed with cold water and thoroughly dried. Gargle the throat with hot salt water, using a tablespoonful of salt to a half cup of water. An excellent gargle is made by using equal parts of "Listerine" and water. If the throat is very sore gargle every hour or half hour; if not, use the gargle three times a day.

A Fiction of Modern Times

THE privacy of the home life is rapidly becoming one of the fictions of modern times, says the editor of *American Homes and Gardens*. The man of affairs, the great lady active in society, find their doings paraded daily in the public press. And the same is true of many less notable folk. So marked has this tendency become, that many personal matters of no public interest whatsoever are daily recorded in the public press as matters presumably of great public concern. That this tendency is often pushed beyond the widest possible limit has been established again and again by criminals old and young, men and women, who have found compensation for their crimes or misdeeds by the notoriety that has been given them by newspaper notice. It is an unfortunate fact that much of the contents of our daily papers is given up to chronicling the doings, especially the bad doings, of persons of no consequence whatsoever. The number of things that actually happen in any one day, that are really worthy of being known to persons not concerned with the person responsible for them, or events directly connected with them is astonishingly few. But the personal element of modern journalism has become so very pronounced that the privacy of the home has been all but destroyed.

It is truly a strange sign of progress that in order to live a good and upright life one's deeds must be blazoned upon the pages of the daily press, one's unimportant doings recorded as matters of public moment, one's dinner parties elevated into the nature of public functions, the weddings in one's family brought so vehemently before the public that the adjacent streets will be crowded with an excited mob, or that one may not be buried without the painful addition of the idle and the curious. All this may be modern, and very characteristic of our time and people, but it certainly is no index to a high civilisation, and, quite as certainly it is no indication of good manners or good times.

Successful Mothers in the Making

SHALL I ever forget the weary little mother who came to me for treatment a few months ago? She is only a girl of twenty-two, yet the mother of three little children. On her bridal day she was fair and blooming, and oh so girlish! but now she is wan and weary, her eyes are listless, and her whole manner suggestive of discouragement. What is the trouble? Is marriage and maternity to be blamed for this pitiful transformation?—No; for wifehood and motherhood should be the crowning joys in a woman's life. The trouble lies here: The girl was wholly unprepared for the heavy responsibilities which came to her with marriage.

And so it is with many a bride! The young girl becomes engaged while still in her teens. She is joyous and gay and care-free. Her thoughts of the future are vaguely romantic. Her mother, blinded by love, feels that it would be cruel to mar her daughter's youthful happiness by even suggesting such sordid subjects as housekeeping, cookery, and laundering. And so to the betrothed girl "the days, like birds, fly by as gaily and as free." The only subject which receives serious consideration during these engagement days is the bridal trousseau. And sometimes the trousseau is given such feverish, anxious thought that when the marriage day dawns the little bride is pale and nervous and frightened. When the honeymoon is over, the young wife settles down to begin life in earnest. Shall we make an inventory of her possessions?—A husband, a house, some furniture, a great number of wedding presents, some beautiful pieces of china and silver, a large collection of doilies and centrepieces, and last but not least, her elegant frocks. Among her accomplishments are a knowledge of music, painting, and fancy needlework. The poor little bride soon learns that a knowledge of marketing, cookery,

laundering, and plain sewing are vastly more important than art or fancy-work, and that plain house frocks and kitchen towels are of as great consequence as dainty dresses and pretty doilies. The work of keeping her house in order and providing three meals every day taxes the young wife to the utmost. But with the expectation of her first baby she is reduced indeed to her wits' end, for she knows nothing of babies and their requirements, and she knows nothing of safeguarding her own health during the period of expectant motherhood. But somehow the child-wife passes through the ordeal, and at length finds herself the mother of a wee helpless bit of humanity. Poor child, can she be blamed for the stupid blunders she makes when she has been wholly untaught in the art and science of motherhood? As the years come and go with their added weight of care and responsibility, the young mother's strength fails, and she finds herself in a state of pathetic invalidism.

These things ought not so to be, and they need not be if only we mothers will awaken to a sense of our responsibility. We who are mothers of daughters should train them from earliest childhood for the duties of wifehood and motherhood. If we maintain that sweet spirit of comradeship which should always exist between mother and child, our little daughters will never be happier than when by our side helping in the discharge of housewifely duties. Let us not scorn our daughters' first attempts at housekeeping. Their little fingers are sure to make mistakes, but practice makes perfect. Often the little maidens may hinder more than help, but they should never be made to feel this. Patiently and lovingly they should be taught the correct methods of doing everything that pertains to good housekeeping. If they are too small to use mother's household implements, they

should be provided with such as are suited to their size.

We would not infer that young girls should be made household drudges—far from it! They should have their hours for play and recreation, but they should also have stated times for learning those things which will be of such inestimable value to them in the years to come.

Young girls should also be taught all that relates to the care of their own

women for the realities of life. But while such books abound, there is also an abundance of clean, wholesome, bright, interesting literature. So let us help our daughters to choose for their reading that which is good and ennobling.

There is another thing which we mothers should remember. Girlhood comes but once, and its years pass all too quickly with their bright, glad days. Then let us not shorten our daughters' girlhood days by urging them into early marriages. The young girl of eighteen or twenty is not fully developed either physically or mentally, and how can she be expected to wisely solve the most important problem that can come to her—the choosing of a life partner? Even if she chooses well, she is likely to make a miserable muddle of marriage simply because she is a child, and unfitted to act a woman's part. But at four-and-twenty the daughter of a sensible mother should be well fitted to make a joyous success of wifehood and motherhood. We mothers may do much for our daughters during childhood; but, oh, if we keep in close touch we may do more for them during the early years of young womanhood. The young girl just entering womanhood experiences strange new emotions, new joys, new sorrows, new ambitions. Now as never before she needs to be guided by a wise and loving mother. She needs to learn how to control these new impulses that stir her heart. She must learn to guard her affections as a sacred trust until such time as with wise counsel and trained judgment she can bestow them upon the good and virtuous man who will be a helpmeet for her. During these years of blossoming womanhood, the daughter may enjoy close association with her mother as woman with woman. She may learn sweet lessons from her who at this sacred time is her rightful teacher.

Mothers, let us keep our daughters close to us; let us cherish their confidence through all the years; let us never relegate to another the sacred responsibility of training our daughters in all that pertains to winsome womanhood. E. S. R.



"Mothers of daughters should train them from earliest childhood."

bodies. Health is far too precious a thing to be squandered through rashness or ignorance. As our daughters approach womanhood let us draw them still closer to us, imparting to them in quiet, confidential talks such knowledge as will fit them to bear the responsibilities which the years may bring.

And let us encourage our girls to read good books. The world is flooded with trashy romances which impart false ideas of marriage and tend to unfit young

False Hair

FOR the benefit of many of our readers who have not had opportunity of information as to the supply for the artificial hair, we quote the following, taken from *McClure's Magazine*:—

"A new and unfamiliar trade, which springs from the great and increasing demand by women for false hair, has invaded the tenements of the Jewish East Side during the last two years. This is the manufacture of 'human hair' out of coarse black Chinese hair imported from the East.

"The hair, according to one of the United States consular reports from Hong-Kong, is brought to Hong-Kong from the interior. It is either sold through Hong-Kong export houses to New York dealers, or bought by purchasing agents from New York. These large firms in New York sell the Chinese hair at two dollars a pound to small tenement manufacturers,—last year the price was only sixty-five cents a pound,—who in turn, after its transformation into soft yellow or brown switches, re-sell to the large firms for six or eight dollars a pound. This hair is then distributed to the retail trade—hair dressers, department stores, etc. An ordinary switch weighing three ounces sells for from seven to twelve dollars at retail. The transformed Chinese hair precisely resembles the most glossy and wavy switches of Western hair, and it is impossible for the average person to detect any difference between them.

"The hair which arrives in Hong-Kong from the interior, is supposed to be taken from the heads of the dead; much of it retains its roots, and seems to have been pulled out, not cut off. Living Chinamen are, of course, particularly averse to parting with their pigtailed.

"Stories are current of people who have caught leprosy or bad skin diseases from the infected switches. In one authenticated case of leprosy in Brooklyn, the doctor asserts that the disease was caught from false hair. Although it is very difficult to disinfect hair adequately,

bacteriological experts say that it is unlikely that leprosy is being brought from China in this way. There is a fair chance, however, that plague germs may be so transmitted, since in China the many bodies of the plague victims of all classes are thrown into the street and there rifled by the dregs of the population. The boiling and chemical soaking of the Chinese hair during the process of transformation should effectually kill all the germs; on the other hand, dirty and clean hair are thoroughly mixed in the tenement workrooms, and passed through the same combs."

Queen Victoria's Wit

THE well-known English draftsman and cartoonist, John Leech, at one time acted as drawing-master to Queen Victoria. One day, says a contributor to *St. James's Budget*, the Queen accidentally let drop her pencil.

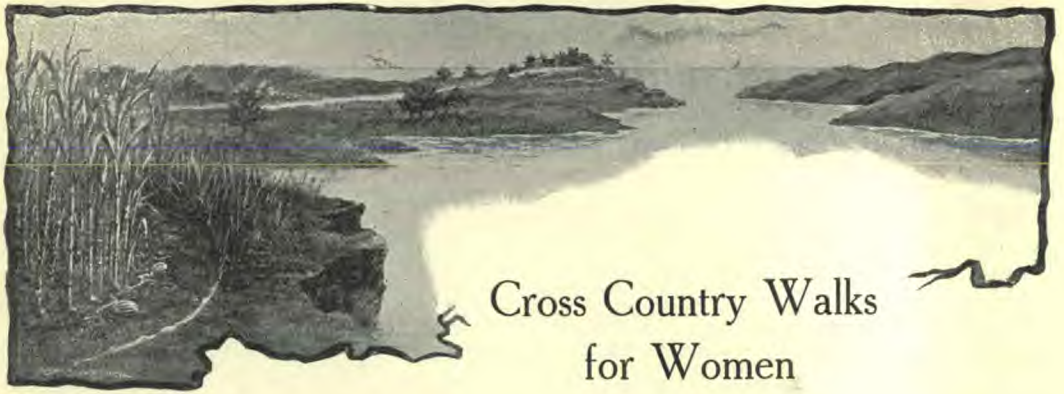
It fell to the ground, and both master and pupil stooped at the same moment to pick it up, when to the horror of Mr. Leech there was a collision; the master's head struck that of his royal pupil.

"Well, Mr. Leech," the Queen said, brightly, before he could find words for an apology, "if we bring our heads together in this way, I ought to improve rapidly."

Thus the awkward situation was saved by her Majesty's tact and sense of fun.



WHEN air-ships become a little more common, physical instructors and anxious mammas will no longer have to beg the youngsters to "stand up straight." We shall all be leaning over backward with our eager eyes fixed on the speeding aviator—or falling monkey-wrench.



Cross Country Walks for Women

By Mary Alden Carver



THERE is no recreation that holds greater possibilities for enjoyment for the woman who is fond of being out-of-doors than walking. Because of its cheapness, healthfulness, and convenience, it makes a strong appeal to the average woman of moderate means. It would be difficult to name many regions in which it would be impossible to gratify one's desire for this form of exercise. On the other hand, it usually follows that if one deliberately sets forth on exploring excursions, agreeable surprises will be met at every turn, and unexpected pleasures will be found in ambush on every side.

In order to derive the most satisfaction from pedestrian outings, it is well to bear in mind a few essential facts; for there are fundamental bits of wisdom one must possess in order to realise the best results. For instance, the subject of suitable dress and accoutrement enters largely into the matter, and decides to a remarkable degree whether or not the

walks will be comfortable and satisfactory, or otherwise.

Never set forth on a tramp unless you are well prepared so far as proper dress is concerned. Those most experienced in the matter find that nothing is more suitable than a simple outfit consisting of a short skirt, with bloomers underneath, a comfortable blouse, a pair of stout, high shoes, a small hat, and heavy gloves, to-

gether with a woollen sweater. No material is more satisfactory for the skirt than a firm, dark-coloured piece of denim. This should be made with a wide hem, to supply added weight to the skirt when finished, and to offer greater resistance to briers and other obstacles that may be encountered. Black sateen is admirable for the bloomers. Add a short petticoat of the same material, and you will have a comfortable walking-habit.



The Out-Door Girl.

High boots with heavy soles are the best. With feet shod in this manner, goloshes may be dispensed with, even in rainy weather. The high tops form a protection from briers, poisonous plants, and annoying insects. They are also a

support for weak or weary ankles. The woollen sweater is a most valuable accessory. It is light to carry when not in use, and may be tucked away into very small space in the knapsack. It is invaluable in case of a lowering of temperature or an unexpected shower.

Stout gloves protect the hands from insects, poisonous plants, and briars, and

There are, however, a few necessary accessories that should be carried on every cross-country excursion. First a parasol is a prime requisite. It is a valuable adjunct in case the sun's rays become too fierce, it is a reliable protection when the rain-clouds lower, and in the absence of both sun and showers is a staff from which one may derive great comfort when



"A Rolling Sweep of Roadway."

are also more durable than gloves of more delicate texture.

A small hat is best, for the reason that one thus dressed is better prepared to go through thickets, and will suffer less inconvenience on windy days. A veil may assist in keeping the hat in place, and will prevent the hair from getting away. A veil is advisable where one is made nervous or fussy by these little annoyances.

Dressed appropriately, one does not fear destruction of garments, the body is free and unhampered, and is shipshape for any weather. It is well to be as little hampered with luggage as possible.

ascending or descending slopes. The parasol is the only article with which one needs to be cumbered, with the exception of an inevitable knapsack. The knapsack, however, has no place in the hands, and should always be suspended from the shoulders by a strong, broad strap. The knapsack may be any desirable small bag one may prefer, but generally a small, flat leather receptacle is best liked. Into this, many essentials to the success of an expedition may be placed. Successful walkers carry the following articles within the knapsack: A field-glass, a small bottle filled with peroxide, a stout jack-knife, some court-plaster, a pair of small

tweezers, a variety of pins, a ball of twine, a compass, a pencil, a note-book, a flask of water, and a small drinking cup. All of these may be crowded into an almost inconceivably small space, and are invaluable.

It is also well to carry a lunch in the knapsack, which, to be most satisfactory, should be strictly utilitarian. Carry nourishing edibles that are hearty and sustaining. After a little experience, one realises that dainties are quite out of place on an excursion, and learns to appreciate simpler, more substantial food.

A small book, if one is an inveterate bookworm, often adds to the enjoyment of a jaunt. When a rest is sought in some shady retreat, the pages may make a particularly strong appeal. And if some accident or unforeseen incident necessitates a prolonged absence from home, a book is frequently a much-appreciated bit of luggage. Into the knapsack may also be crowded the little souvenirs or trophies that may be accumulated upon an expedition.

As to the road one should travel, almost any highway is desirable if a paved thoroughfare is avoided. A rolling sweep of road-way is excellent, as it is far less wearying than an endless level, and offers variations that are impossible to an up-grade route, or one that is entirely on the downward slope.

Of course, this has no reference to mountain-climbing efforts, which belong in a class by themselves. This article deals with the cross-country walk that may be indulged in by any one at any time. Remembering that a pavement is hard for tender feet, it is well to leave the city, when setting forth upon an expedition, by way of a tram or train to the suburbs. In this way one is precipitated into the open without feeling signs of fatigue. When once in the country, much more pleasure is derived if the highway is not followed too closely. It is much more enjoyable to wander into ravines, stroll off across meadows, dip into the forest or wooded tracks, and loiter along river banks or lake shores than to

keep strictly to the highway, with its customary traffic and dust.

The gait itself should be an easy stride. One will soon acquire a rolling, swinging motion that is conducive to endurance and rest. The journey should be made by easy stages, avoiding all fatigue. A "lift" is sometimes offered by a friendly farmer. This breaks the monotony of the walk, and gives colour to the expedition. It adds to the novelty of the day, and affords a pleasant experience to all concerned. It is advisable to meet as many of the inhabitants of the rural regions as possible. These chance meetings offer great opportunities for character study, and are often a source of diversion and much pleasure to everyone. One who has not had the experience is sure to be amazed at the hospitality abounding in the country. With reference to the route, many things should be taken into consideration. It is well to observe the position of the sun, and avoid walking with its rays shining directly into the face or eyes. One should be mindful of the direction in which the wind is blowing, and should consider the topography of the country and the lay of the land.

IF fresh-air fund projects need any supporting arguments, a weighty one is found in the announcement that two hundred and seventy little children sent to the country by a New York newspaper gained an aggregate of five hundred and twenty-five pounds in weight in two weeks.

THE common drinking-cup is not permitted in Massachusetts. The parks, streets, schools, and outdoor drinking-fountains generally are provided with "bubblers," and hotels, theatres, railway-stations, and cars must provide some substitute for the old-fashioned common cup, under penalty of a fine of five pounds for each case of neglect. This is in accordance with a recent act of the legislature designed to check the spread of communicable disease.

The Drudgery of Your Calling

RESPECT it. Take pleasure in it. Never feel above it. Put your heart in it. See the poetry in it. Work with a purpose. Do it with your might. Go to the bottom of it. Do one thing at a time. Be larger than your task. Prepare for it thoroughly. Make it a means of character building. Do it cheerfully, even if it is not congenial. Do it in the spirit of an artist not an artisan. Make it a stepping-stone to something higher. Endeavour to do it better than it has ever been done before. Make perfection your aim, and be satisfied with nothing less. Do not try to do it with a part of yourself—the weaker part. Keep yourself in condition to do it as well as it can be done. Regard yourself as a co-worker with the Creator of the universe. Believe in its worth and dignity, no matter how humble it may be.

1. Recognise that work is the thing that dignifies and ennobles life.

2. Choose, if it is possible, the vocation for which nature has fitted you.

3. See how much you can put into it, instead of how much you can take out of it.

4. Remember that it is only through your work that you can grow to your full height.

5. Train the eye, the ear, the hands, the mind—all the faculties—in the faithful doing of it.

6. Remember that every vocation has some advantages and disadvantages not found in any other.

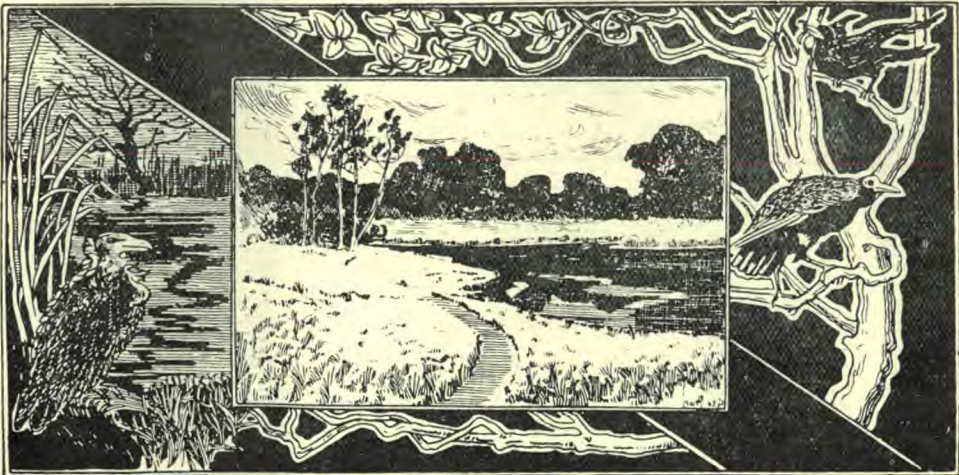
7. Regard it as a sacred task given you to make you a better citizen, and to help the world along.

8. Remember that every neglected or poorly done piece of work stamps itself ineffaceably on your character.

9. Refuse to be discouraged if the standard you have reached does not satisfy you; that is a proof that you are an artist, not an artisan.

10. Educate yourself in other directions than the line of your work, so that you will be a broader, more liberal, more intelligent worker.

11. Regard it not merely as a means of making a living, but first of all as a means of making a life—a larger, nobler specimen of manhood or womanhood.—*Christian Intelligencer*.



Australia, the Ideal Climate for a Vegetarian Diet

IF climate has anything to do with food habits, and common sense most assuredly tells us that it has, we should find the people of Australia living very much like those around the Mediterranean. But such is not the case, for our people eat annually ten times as much meat as the Italian.

Just review the menu for Christmas Day. Very few homes were without the hot dinner with its roast beef or turkey and plum pudding. A most unseasonable dinner, indeed, for the middle of summer in a semitropical climate. More appropriate would it be in the land of our forefathers where the earth is clothed in her white robe of snow. We cling to the ways of our ancestors. We get into a rut and stay there when it would be well for us to remember that the only difference between a rut and a grave is that the latter is a little deeper.

Someone has said that Australia is inhabited by a people intensely carnivorous and addicted to tea. This cannot be denied while it is a fact that the Australian eats annually as much meat as two Englishmen, three Canadians, four Germans, or ten Italians.

Many eminent medical authorities are agreed that excessive meat eating is harmful. Other scientists have concluded that perfect health can be maintained on a non-flesh dietary.

Gautier, the noted French dietitian, says that the vegetarian diet mitigated by the addition of milk, butter, fats, and eggs, has great advantages; that it exposes one much less than the ordinary diet (especially if the latter is rich in meats) to diseases of the skin, rheumatism, and congestion of the internal organs. He adds that it is practical and rational, and it should be accepted and commended by those who pursue the ideal of the formation and education of gentle, intelligent, artistic, and nevertheless prolific, vigorous, and active races.

Meat eating is an invitation to disease. Animals die as men and women die with their ailments within them, and if we eat of them we eat the products of their disease processes.

Almost every day our attention is called to the death of an individual from Ptomaine poisoning as a result of meat-eating. Precautions are being taken to protect the public from infected milk from tuberculous animals. There are rigid laws regarding meat inspection, but not so rigid that one can be positive that no infected meat can pass the inspector's notice, notwithstanding the fact that he does his work well. By eating underdone beef or pork one may acquire tapeworm. The same may be said of fish. Only a short time ago there appeared in one of the leading daily papers an article by good authority entitled "Cancer in Fish." A good deal has been said and written on the subject of meat eating and its relation to cancer. Dr. G. Cook Adams made a series of statistical studies under the direction of the Chicago Board of Health. Says this expert: "There cannot be the slightest doubt that the great increase of cancer among the foreign born of Chicago over the prevalence of that disease in their native countries is due to the increased consumption of animal foods, particularly those derived from diseased animals.

"The Italians and the Chinese are the only two of all the races represented in Chicago that do not show a far greater death-rate from cancer than in their own homes. The Italians keep up the use of macaroni and spaghetti, while the Chinese adhere to their native diet of rice."

Cancer, heart disease, and chronic Bright's disease have increased alarmingly in recent years. Reports published by Dr. W. H. Guilfooy of the New York Health Department reveal the fact that the death-rate for the three diseases mentioned are highest among the foreigners of flesh eating nations.

To the majority of people "vegetarianism" brings to their idea a dinner of boiled cabbage, turnips, parsnips, etc. It does not sound very appetising, and one does not wonder at the objections raised such as, "There is no strength in such a diet." "I could not exist on such." "I need something which gives endurance." Let the vision of boiled cabbage, turnips, etc., be forever banished from the mind, and we will endeavour to change the picture to something which will give health, strength, and happiness.

Just one more scientific fact. Irving Fisher, Professor of Economics at Yale University, became interested in the subject of meat eating from that of a political economist. Meats, as a general rule, are the most expensive part of the national dietary, and it is apparent that if a fleshless diet will increase endurance it would also increase the national earning capacity. He conducted a series of experiments to test the endurance of flesh abstainers and flesh eaters. The results of the competitive tests were all in favour of the flesh abstainers.

Experiments of the same nature were carried on at about the same time by two women scientists in Belgium, Dr. J. Ioteyko, head of the laboratory at the University of Brussels, and Mlle. Varia

Kipiani. These investigators became convinced that the vegetarian régime is a more rational one.

Our sunny land with its fertile soil will produce foods suitable for a sustaining dietary without the use of flesh foods.

Let us glance at a list of foods from which the vegetarian can select a balanced menu:—

Peas	Gluten preparations
Beans	Potato
Lentils	Rice
Nuts and Nut product	Breads
Nut oils	Cereals of all kinds
Ripe olives	Fruits of all kinds
Cream	Fruit juices
Butter	Dried fruits
Eggs	Raisins, dates, figs
Cottage cheese	Vegetables of all kinds
Honey	Salads

Thousands of homes and scores of educational institutions in all parts of the world are using the above as main articles of food, and the health of individuals who live on such a dietary demonstrates its efficiency.

There are but few housewives, who after becoming familiar with vegetarian cookery, would return to the use of flesh foods, and as one becomes more experienced we are surprised at the endless variety of nourishing, dainty, and tempting dishes which can be prepared with little trouble and expense. E.M.H.



Vegetarian Cookery Made Easy

THERE is no department of life where superior intelligence is more needed than in the selection and preparation of food, upon which so largely depend the health and physical welfare of the family circle."

The ordinary household, where a flesh diet is used, may lack a few cooking utensils and supplies, which, to the vegetarian cook means convenience and saving of time.

A few suggestions may be of help to those who are desirous of adopting the non-flesh method of cookery. It is well to have on hand a supply of legumes—split peas, green peas, haricot, lima, and Canadian-wonder beans, German and Egyptian lentils, walnuts and almonds, or any other variety of nut may be added to the list.

No careful housewife will cook any foods without first examining carefully to find grain or particles of rubbish which will get among these articles. It is therefore a saving of time when cooking to have these in readiness. During some spare minutes of the day look over these legumes, and put them in clean, labelled, covered tins; or, better still, the screw-top glass preserving jar (Mason's). The advantages of the latter are that one can see when the supply needs replenishing, and being covered securely prevents mice and other pests from intruding.

Another set of tins or glass jars should contain rice, oatmeal, cracked wheat, barley, sago, macaroni, or other grains and cereals. Still another with raisins and currants, which should have been looked over, washed and dried thoroughly before being placed in the jars. The right way to do this is to put the raisins or currants into a colander, place it in a pan of warm water, allowing the currants to remain until plump. This will loosen the dirt, which, while they are shrivelled, sticks in the creases, and they may then be washed by dipping the colander in and

out of clean water until they are free from sediment. Rinse in two waters, then spread upon a cloth and let them get perfectly dry before using. It is also very handy to have a pound or two of dates looked over and stoned, and placed in jars ready for puddings and fruit salads. Last, but not least, one should have a large glass jar of browned flour and another of zwieback, or toasted bread-crumbs, as well as slices of zwieback.

Browned flour is prepared by spreading a cupful, or as much more as is convenient, thinly on shallow tins and placing in a moderately hot oven, stirring frequently until lightly and evenly browned. This is excellent for thickening and flavouring certain soups and gravies and adding to various vegetarian roasts.

Zwieback may be made when the oven has been heated for ordinary cooking. Good, light, stale bread is the best. It should be cut in uniform slices not more than half an inch thick, each slice being divided in halves, placed on tins or on the slide and baked or toasted in a slow oven for half an hour, or longer, until it is browned evenly throughout the entire slice. The zwieback may be prepared in considerable quantity, and kept on hand in readiness for use for fruit or vegetable toasts (recipes for which will be given from time to time). By putting some of the well-baked toast through a mincing machine nice fine crumbs can be made, which may be utilised in many dishes. Be sure that there is not a trace of moisture in the toast before grinding, or you will meet with great difficulty. If it is dry there will be no trouble whatever. If the housewife's purse is too slender to lay in a supply of articles mentioned, they can be purchased as required in small quantities.

Mincing Machine.—If there is not one of these in the kitchen such an article should be procured, for many vegetarian dishes call for minced nuts, legumes, etc.

In purchasing a mincer see that it is a strong one which can be cleaned easily.

Double Boiler.—It is a great convenience to have such a utensil for the preparation of sauces and gravies, since it facilitates even cooking, and renders them less liable to become scorched. The inner cup should be placed on the top of the stove until the sauce has become thickened, as in the cooking of grains, and afterwards placed in the outer boiler to continue the cooking as long as needed.

Colander.—This is another useful utensil. It is necessary sometimes to remove the skins of legumes and the cellulose from coarse fruits and vegetables. This can be done by rubbing them through a colander. Choose one with holes evenly distributed, and not too large.

Bottled Fruit and Fruit Juices.—The vegetarian cook is the one who can appreciate the value of a supply of bottled fruit and fruit juices of all kinds. Many of the nicest and most juicy and delicately flavoured fruits, such as strawberries, raspberries, currants, gooseberries, plums, mulberries, cherries, peaches, and apricots are in season for only a comparatively short time.

The little trouble caused in bottling these fruits is eclipsed by the convenience and pleasure of having them at an unseasonable portion of the year. Included in the list should be a large supply of tomatoes preserved whole, others reduced to a pulp, then strained through a colander and bottled. The tomato being used in such a variety of ways makes an excellent savoury addition to the vegetarian menu.

Directions for bottling fruit and fruit juices are given in the "Friend in the Kitchen."*



To those readers who would like to try a few dishes we give the following recipes:

Cream of Browned Onion Soup.—Four medium-sized onions, one cup of milk, one cup of thin cream, or rich milk may be used, one teaspoonful of salt, one tablespoonful of browned flour. Cook the onions in a small amount of water until perfectly tender, then cook the liquid until it becomes thick and syrupy. Put through a colander. Add the liquids, and thicken with the browned flour. Add salt.

Tomato Cream Soup.—Heat two quarts of strained, stewed tomatoes to boiling; add four tablespoonfuls of flour rubbed smooth in a little cold water. Let the tomatoes boil until thickened, stirring constantly that no lumps form; add salt to season. Have ready two cups of hot rich milk or thin cream. Add the cream or milk hot, and let all boil together for a minute or two, then serve.

Peas Cutlets.—One cup of pea pulp. (Split or green dried peas soaked overnight, then cooked until perfectly tender, simmering towards the last until they become as dry as possible.) One cup of cooked rice, one grated onion, one-half teaspoonful of sage or other seasoning, and salt to taste, one-half cup of tomato juice, one-third of a cup of browned flour. Mix together, and mould in cakes two-thirds of an inch thick. Bake half an hour. Serve with tomato or cream sauce.

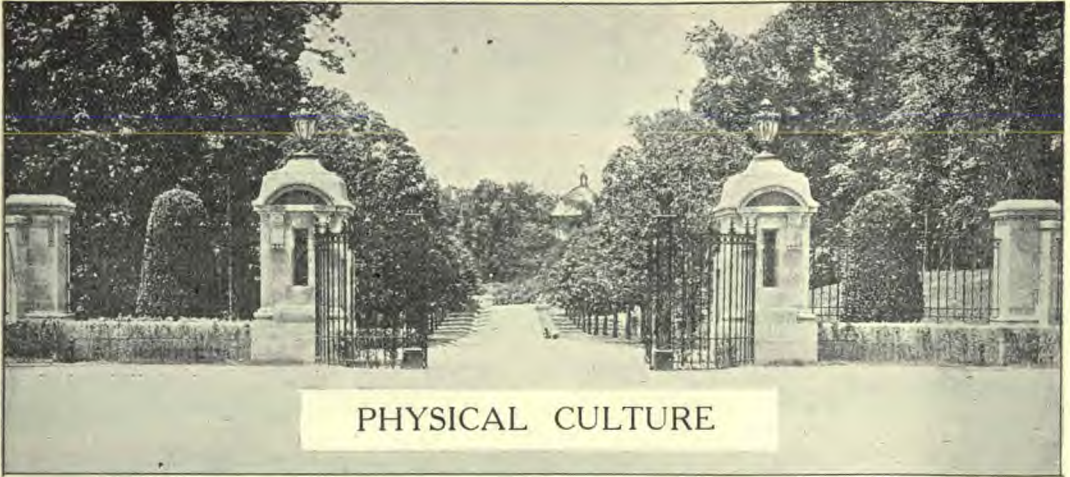
Lentil Gravy with Rice.—Rub a cupful of cooked German lentils through a colander to remove the skins, add one cup of rich milk, part cream if it can be afforded, and salt if desired. Heat to boiling, and thicken with a teaspoonful of flour rubbed smooth in a little cold milk. Serve hot on nicely steamed or boiled rice, or with well-cooked macaroni.

Bean and Nut Croquettes.—Cook dried beans, any variety, until soft. Strain through a colander to remove all skins. Add equal parts of walnut meat ground in a mincer. Season with salt and a little sage. Mix with beaten egg. Form into croquettes, and bake until dry and nicely browned. Serve with tomato or cream gravy.

E. M. H.

WHEN the study of longevity and eugenics has become better organised, it is probable that careful scientific records will be made and kept concerning such remarkable families as that of a Hungarian woman who died lately in Vienna, at the age of one hundred and twelve years. She belonged to the Jewish race. Her maternal grandmother attained the age of one hundred and thirteen, and her grandmother on her father's side the age of one hundred and ten. Two of her sisters lived to be over ninety. She leaves two children well over eighty; and if time is money, she may be said to have married money, for her husband lived to be one hundred and five.

*Obtainable from the office of this magazine.



PHYSICAL CULTURE

Diet in Training

THE question of diet is of the first importance in the training of athletes, and concerning this matter widely divergent views have been expressed by various authorities. It is freely allowed that the opinions of old-time dictators on the best means of feeding those in training for the exertion of severe physical efforts, have been for the most part overturned. The diet in vogue in such cases forty or fifty years ago, would not meet with favour in these days. Possibly the pendulum has swung too far in the opposite direction, and a certain amount of faddism has been introduced into the subject. Yet it appears to have been definitely proved that youths and men can be brought into excellent physical condition, and kept in that condition, on foods which would have been regarded with the greatest suspicion in days of yore. For instance, there are many formidable athletes nowadays who are vegetarians. Mr. Eustace Miles, one of the best tennis players who has ever lived, is a rigid vegetarian. There are also those who confine themselves to a diet of fruits and nuts, and who seem to be able to maintain a satisfactory bodily condition. In the face of

varied and contradictory experiences, it must be confessed that one can not yet make a dogmatic statement with regard to diet for athletes.

H. I. Gillett read a paper on diet in training before the Oxford Medical Society in the Radcliffe Infirmary, Oxford, on June 17. He pointed out that the majority of Oxford rowing men consume on the average of 169 grammes of proteine daily, thus exceeding Atwater's standard of 150 grammes daily for those doing severe muscular work. Liebig taught that the oxidation of proteins was the sole source of muscular energy; hence the diet formerly consisted largely of flesh. But now carbohydrates and fats are recognised as sources of energy, and a high proteine diet is regarded as unnecessary or harmful. Atwater and Bryant, in their dietary studies in university boat crews, estimated that the average amount of proteine consumed daily was 155 grammes. They did not show that it was necessary to take so much, but they said that the diet best suited to training had not been decided upon, and so it varied according to the ideas of special trainers. Chittenden, on the other hand, does not follow the ideas of trainers or tradition, but has

proved, at any rate to his own satisfaction, that athletes can keep in good condition, and compete on favourable terms with others, on as little as fifty-five grammes of proteine daily, the amount of proteine varying with the weight of the individual. Gillett thought that Chittenden's estimate of the quantity of proteine needful was too low, and suggested that in order to ensure nitrogenous equilibrium it would be safer to allow a considerably larger amount.

Excess of proteine is bad, in that it must mean unnecessary work for the digestive organs, liver, and kidneys, and the purins may cause symptoms of general malaise and irritability, and throw extra work on the organs of excretion. Toxemia may result from decomposition of proteine, causing a high-blood pressure with consequent strain on the heart, in addition to the strain of exercise. The point is how to discover what constitutes an excess of proteine, and to find out whether a hard and fast rule can be laid down with respect to the diet of athletes. Judging from experiments and tests which have been made up to the present time, it may be stated with emphasis that no arbitrary rule can be deduced from these, and it seems likely that the diet of athletes must be regulated according to the idiosyncrasies of individuals under the direction of medical men or skilled trainers. A medical trainer should not take long to find out whether his pupils are suffering from an excess of proteine, or, at least, he should be able to ascertain with a sufficient degree of exactitude, after a few weeks' observation, whether their diet is suitable. The personal equation after all must be considered, and it does not appear reasonable to suppose that a routine diet can be ordered that will be suitable for each and every athlete.—*Medical Record.*

EXERCISE can often take the place of remedies, but all the remedies in the world cannot take the place of exercise.—*Tissot.*

Tobacco and Breathing

A FEW weeks ago, while conversing with one of the trainers connected with an athletic club, a stalwart young man, observing that the gentleman smoked, remarked that he thought smoking was hardly consistent with the highest degree of physical development.

Said the athlete: "You are certainly right. I am aware of this fact, and I do not believe in smoking. I gave up smoking three years ago, having noticed its injurious effects, and I have only recently returned to the habit. I am going to relinquish it." Wishing to obtain information from a practical observer respecting the influence of tobacco upon physical endurance, he asked: "What evidence have you that tobacco injures you?" The prompt reply was: "Tobacco at once impairs the wind."

"Do you find that after smoking a single cigar your breathing capacity is diminished?"

"Certainly. After having smoked a cigar I cannot run or engage in violent exercise without getting out of breath. I learned long ago that I must never smoke before engaging in a boxing or fencing bout or any other vigorous exercise."

"Have you noticed the same effect in others?"

"Oh, yes; it is universally the case. I have always noticed that men who smoke before they go on the running track in the gymnasium are out of breath after they have made two or three laps, while the same men, if they abstain from smoking before exercising, have good wind."

The fact that tobacco weakens a man's wind and lessens his endurance, affords the best possible proof that it must shorten his life; for the power to live long means simply the power to endure the long physical strain and emergencies to which the body must be continuously subjected during life.

No man who cares to live long and well can afford to smoke or use tobacco in any form.—*Selected.*

Correct Breathing—Lung Development

OF the importance of correct breathing and a healthy development of the lungs too much cannot be said or written. Any system that does not place this in the forefront is not worthy of the name of physical culture. There can be little or no culture of the physical man where the habit of taking in a sufficient amount of fresh air; holding it without inconvenience, and then allowing it to go slowly out of the lungs, is not cultivated and aimed at.

The Lungs and Their Associations

The lungs are two spongy, elastic masses, shaped like blunt-pointed cones. They fill up the chest or thoracic cavity, from the neck to the lower borders of the ribs, practically enclosing the heart, and separated from the stomach and abdominal cavity by a dome-shaped muscle, the diaphragm. The latter is the muscle of which we hear most in discourses on deep breathing, and there are other muscles that might, to real advantage, be given prominence in this connection. They are those of the neck, including the upper trapezius, the intercostals (between the ribs) and the abdominal muscles. The ribs and their connections with the sternum, or chest bone, cover and protect the delicate contents of the chest cavity, and a free, active, and flexible state of these bones is of the utmost importance for health.

Breathing

There are two important functions associated with respiration, or the in-going and out-put of air to and from the lungs, viz., the passing of oxygen through the membranous covering of the inside of the lungs into the blood-stream; and the throwing off of the carbonic acid gas from the venous blood, through the same membrane, into the lungs and then out of the body. But there is also another process, which might well be termed "Internal Respiration," that is, the exchange of

gases which goes on between the capillaries and the tissues, in which the arterial blood from the lungs parts with its oxygen and absorbs carbonic acid. In scientific body-building, or physical culture, these three processes, as above briefly outlined, must be considered.

Natural Breathing

There is no easier, healthier, and more quieting movement for the human body to make than that required for deep breathing. The invalid confined to chair or bed, as well as a person in good health, can breathe deeply hundreds of times a day, thereby invigorating greatly his or her entire body. When we give attention to breathing, and so regulate respiration, it is termed voluntary breathing. We will deal only with the former, as the latter will look after itself in a healthful way once we have acquired proper methods of voluntary breathing.

Voluntary or Controlled Breathing

To learn deep breathing, be as passive as possible; that is, assume a position in which all the voluntary motor muscles are inactive. Lie flat on the back, perfectly horizontal, without even an elevation of the head, and in a fully relaxed state.

Shut the mouth and draw the air in through the channel provided by nature—the nose. *Now note particularly how the chest expands or bulges out.* At the commencement of the in-breathing, the lower part of the lungs will be filled, and because of the descent of the diaphragm the stomach will also rise, the sides or ribs swell out, the intercostal muscles be brought into action, and lastly the top of the lungs, until you feel that the whole chest cavity is fully inflated. Then slowly exhale, first observing the falling in of the stomach, lower chest, and sides, and, lastly, the upper chest.

As a result of bad habits, most persons will raise the upper ribs at the commence-

ment of the inhalation, while others make a similar movement with the lower ribs; but both of these exertions are wrong, and they will gradually cease by continued practice of correct breathing. There

ought to be no effort or muscular exertion other than that associated with natural or involuntary inbreathing of the air.

This is the safe and sure method for all, and is the elementary or initial exercise in deep breathing.

Caution to Consumptives

Figs. 1 and 2 represent *costal* breathing, which is sometimes taught as being different in men and women. It is seen in the heaving of the upper chest when a lady with a corset sits down in a railway carriage after a "spurt" for the train. It is unnatural.

the above breathing exercise only—the gentle inflowing and outflowing of the air—should be attempted. As time goes on, and the pupil improves in health and lung power, short retentions of the breath may be admitted.

A More Vigorous Breathing Exercise

While still reclining, and after taking in a deep, full breath, hold the air a long time, and press it from the lower to the middle and to the upper part of the breast and vice versa. By practising until the lungs and their muscular connections are strengthened, as many (or rather as few) as ten or fifteen complete respirations may be taken per minute without the slightest fatigue to the chest.

A Laughing Exercise

While standing or reclining easily in a chair, inhale a slow, deep, full breath, hold it for a few seconds, then slowly

exhale with a whistling sound through the lips; then, without inhaling, laugh heartily—Ha! Ha! Ha!—until you have to twist and bend the trunk to get out the syllables, and at last you have to give in and take in a breath. This is an excellent exercise, developing those muscles which assist in forcible or "explosive" breathing, and, likewise all the internal organs of digestion, etc.

Breath Retention in Speaking and Singing

After a time it will become quite natural to take in a quiet, deep, full breath through the nostrils, before speaking in public or singing. But we must go one step further in lung gymnastics, and that is conserving the breath. The majority of people allow the air to pass from their lungs much too quickly. Here is a suggestion that may be helpful—put the hand on the soft area just below the sternum and in the angle formed by the spreading away of the ribs therefrom. Now take in a deep breath, and press this part out against the hand, and while keeping it pressed out against the hand speak distinctly to a friend or recite some piece, just allowing the minimum amount of air to be used in the effort. Singers can do the same while retaining a long note or singing a part of a song. Breath retention and speaking with deliberation is also a cure for stuttering.

It is not well to join deep breathing as described with other bodily movements.



FIG. 1. FIG. 2.
Voluntary Rib-Breathing.

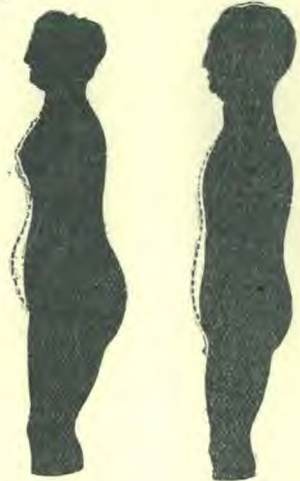


FIG. 3. FIG. 4.
Voluntary Deep Inhalation.

Figs. 3 and 4 illustrate natural deep inhalation, as recommended in our article. This is the same in both sexes.

It is only in sudden forcing of the air into the upper parts of the lungs, or in very powerful or "explosive" exhalation, causing an expansion of the thorax, that the voluntary motor muscles are brought into play.

While advising regular breathing while exercising, we do not think that any good can come from trying to do too many things at once. Dr. Neumann writes: "The motor muscles are antagonistic to those of inhalation and exhalation." It is well to take a few arm extension or arm-circling exercises before the deep breathing, as this insures a natural stimulus to the lungs, but the full benefits that accrue from proper voluntary breathing require full attention to the one act.—*William M. Scott.*

Effects of Cigarette Smoking

DR. MARDEN, in *Success*, has this to say to the boy beginning the use of the cigarette: "The whole tendency of the cigarette nicotine poison in the youth is to arrest development. It is fatal to all normal functions. It blights and blasts both health and morals. It not only ruins the faculties, but it unbalances the mind as well. Many of the most pitiful cases of insanity in our asylums are cigarette fiends. It creates abnormal appetites, strange longings, undefined desires, discontent, uneasiness, nervousness, irritability, and, in many, an almost irresistible inclination to crime. In fact, the moral depravity which follows the cigarette habit is something frightful—lying, cheating, impurity, loss of moral courage and manhood, a complete dropping of life's standards all along the line, are its general results."

Magistrate Crane, of New York City, says: "Ninety-nine out of one hundred boys between the ages of ten and seventeen years who come before me charged with crime have their fingers disfigured by yellow cigarette stains. I do not care to pose as a reformer, but it is my opinion that cigarettes will do more than liquor to ruin boys. When you have arraigned before you boys who are hopelessly deaf through the excessive use of cigarettes, boys who have stolen their sister's earnings, boys who absolutely refuse to work, who do nothing but gamble and steal, you cannot help seeing that there is some

direct cause, and a great deal of this boyhood crime is, to my mind, easily traced to the deadly cigarette. There is something in the poison of the cigarette that seems to get into the system of the boy and to destroy all his moral fibre."

Cigarette smoking is no longer simply a moral question. The great business world has taken it up as a deadly enemy to advancement and achievement, and many leading business firms all over the country have put the cigarette on the prohibition list. Anything which benumbs the senses, deadens the sensibilities, and dulls the mental faculties is a deadly enemy, and nothing will do this more quickly than the cigarette.—*Physical Culture Magazine.*

THOSE who try to do without recreation pay the penalty in arrested development. They dry up. Their lives become juiceless and uninteresting. They do not get rid of the brain ash from one day to another, and the monotony of using the same faculties a great many hours each day without change or diversion will soon so deteriorate the mind that it will lose its elasticity, its power to rebound, and the brain will operate in a perfunctory manner, instead of with strong, vigorous action, and will produce nothing original or great.—*Success.*

THERE is a saying that every time the sheep bleats it loses a mouthful of hay. Every time you allow yourself to complain of your lot, to say: "I am poor; I can never do what others do; I shall never be successful; I have not the ability that others have; I am a failure; luck is against me," you are laying up so much more trouble for yourself, making it all the more difficult to get rid of these enemies of your peace and happiness, because every time you think of them or worry about them they will go a little deeper into your consciousness; for thoughts are living things—real, creative forces.—*Selected.*



Alcohol and National Deterioration.

OCCASIONALLY a crisis occurs in the history of a nation similar to that in the life of an individual, when a pause becomes necessary for introspection and possibly for a reconstruction of its affairs and conduct. Such a pause occurred from the unpreparedness of Great Britain and the muddle and surprises which it experienced during the South African war, and an opportunity offered to the Imperial Government for reconsidering its position through a lesson so costly and severe that it could not reasonably be neglected. The cry of "efficiency" from one statesman and the call for "the use of reason" from another found a ready echo in the periodicals and newspapers of the hour, and in consequence we made several efforts to take stock of our position with the object of reconstruction. So far back as April, 1903, it was pointed out in the *Contemporary Review* that sixty per cent. of recruits were, through physical deterioration, unfit for army service. As a result of this warning, the then Home Secretary approached the Royal Colleges of Physi-

cians and Surgeons in regard to a public inquiry, and the reply of the college authorities included among other points a reference to the changes in the conditions of life within the last fifty years, especially mentioning in this particular changes in food and drink, these being possibly two of the most serious causes in the production of deterioration, and there was to-day a wholesale substitution of chemically prepared products for fresh food, and also a greatly increased use of artificial stimulants of every kind.

The Duke of Devonshire, as Lord President of the Council, after stating that the physical deterioration of the lower classes was a menace to the military and industrial interests of Great Britain, appointed a special Inter-Departmental Committee to inquire as to the existence of such a condition, as to its causes, and also as to what steps should be taken for its prevention, and how such deterioration could be most effectually diminished.

As the success of a nation, whether in peace or war, depends greatly upon the physical state of its individual members,

and as our bed-rock in this country is the industrial community, it must follow that this section should be strong, vigorous, and healthy.

There can be no progress and no security for us in the world's markets without full and adequate attention to this side, and there certainly can be no progress or gain in our population, wealth, or industry without a sound physical basis, which is so closely related with our commercial supremacy. As to this aspect the mind of the people is quite made up. The connection between alcohol and impaired physique is an accepted and irrefragable fact, and the evidence placed before the Inter-Departmental Committee supports this view and is most significant, for fifty-seven out of the sixty-eight witnesses referred to alcohol in some form or another as the cause of deterioration. It was also emphasised by the further observation that drink and drunkenness were causes of arrested growth and development, and that a rapid amelioration of physique was known to take place with a decrease in such conditions as drink and drunkenness, which were the direct cause of physical infirmity in the children, and the indirect cause through parental improvidence, idleness, and neglect.—*Robert Jones, M.D., M.R.C.P.*

“SHORT life, less work, worse work—that is the output of alcohol.”

Something to You

“’Tis nothing to me,” the beauty said,
With a careless toss of her pretty head ;
“The man is weak if he can’t refrain
From the cup you say is fraught with pain.”

It was something, when, in after-years,
Her eyes were drenched with briny tears,
And she watched in lonely grief and dread,
And started to hear a staggering tread.

“’Tis nothing to me,” the mother said ;
“I have no fear that my boy will tread
In the downward path of sin and shame,
And crush my heart and darken his name.”

It was something to her when her only son
From the path of right was early won,
And madly cast in the flowing bowl
A ruined body, a sin-wrecked soul.

“’Tis nothing to me,” the merchant said,
As over his ledger he bent his head ;
“I am busy to-day with tare and tret,
And have no time for fume and fret.”

It was something to him when over the wire
A message came from a funeral pyre :
A drunken conductor had wrecked a train,
And his wife and child were amongst the slain.

“’Tis nothing to me,” the voter said,
“The party’s loss is my only dread ;”
Then he gave his vote to the liquor trade,
Though hearts were crushed and drunkards made.

It was something to him in after-life ;
His daughter became a drunkard’s wife,
And her hungry children cried for bread,
And trembled to hear their father’s tread.

It is something for us to idly sleep,
While cohorts of death their vigils keep
To gather the young and thoughtless in,
And grind in our midst a grist of sin.

’Tis something, yes all, for us to stand
Clasping by faith the Saviour’s hand ;
To learn to labour, live, and fight
On the side of God and unchanging right.
—Selected.





The Children's Hour

Never Deceive a Dog

EARLY one morning Mark Lewis was awakened by a low whining under his window. Mark was spending the summer on his grandfather's farm, and his bedroom, being in the gable of the house, was just above the side door.

Mark crawled quickly out of bed and ran to the open window. The big, flat door-stone was just beneath him, and on the stone sat a puppy.

The dog was brown and white, with a coat of long, thick hair that would have been pretty if it had not been wet and muddy. full of snarls and tangled with burrs. The little fellow was so thin that anyone could count all his ribs. He was shivering, too, for the early morning air was sharp and nipping.

The dog heard the slight noise that Mark made when he came to the window, and looked up at him with a pair of soft brown eyes that seemed to say, "Please give something to eat to a poor dog that has no home and is out of work!"

Mark hurried down and opened the door. The little dog came in, whimpering and wiggling all over. In a minute his cold, black nose was deep in a dish of milk, and it did not come out until the last drop was gone.

It took a good deal of teasing on the part of Mark and his cousins, Fred and Charlie, to get permission to keep the puppy, but at last grandfather and grandmother said yes, and all three of the boys were very happy. They gave the dog the name of Bob, and began at once to teach him to mind and to do tricks.

One day, when they had had him about a week, they were playing with him in front of

the house. Mark had an apple which he would throw for Bob to chase; but they thought it was better fun sometimes not to throw the apple, but only to make the motion. Poor Bob would see Mark's arm move, and away he would dash, without stopping to see whether the apple went or not, and then he would look so puzzled that you could not help laughing at him.

While they were playing in this way, the doctor drove along and stopped to see what the boys were doing. When he had watched them a moment he called them up to his carriage, and said, "Boys, I am sorry to see that you are lying to your dog."

"Why, sir, what do you mean?" asked Fred. "We haven't said anything to him, and he couldn't understand it if we did."

"Yes," said the doctor, "but people sometimes tell lies by what they do as well as by what they say. Your little dog has only a small dog's mind. He cannot think things out for himself, as you can. When you make a motion as if to throw the apple, he trusts you. He thinks you mean to throw it, and when you hold the apple back, you really tell him a lie. By and by he will learn that he cannot trust you, and then he will not do what you tell him to. You ought never to lie to a dog."

This seemed funny to the boys at first, but they all liked the doctor, and so they stopped fooling Bob. In time he became so well trained that he would do anything his young masters told him to do, if only he could understand what they meant.

Best of all, he liked to bring things out of the water, and he had learned that he could trust his young friends so surely that if one

of them only made a motion toward the water in Bob would go, certain that he would find there something that must be brought to land.

One afternoon near the end of the long vacation the boys went down to the shore of the pond to play. While Mark and Fred were watching a turtle, little Charlie went over to a big rock that reached out into deep water. All at once there was a splash and a scream, and Charlie was gone. He had slipped from the rock.

The other boys ran, crying, toward him, and Mark lay down on his stomach, to reach out as far as he could, but Charlie was nowhere to be seen. In their fear both boys screamed as loud as they could. A second later Bob came tearing out of the bushes, barking as if he knew something was wrong, and was trying to say, "What's the matter? What do you want me to do?"

Both boys had the same thought at the same time. Bob could do what they could not. Each made the motion of throwing something into the water, and each cried, "In, Bob, in! Go fetch it!"

With a great splash Bob leaped clear of the rock and began to swim in a circle. He had not even made one turn when Charlie's head came up close at hand. The dog did not have to be told what to do. He knew that he was there to get something, so he fastened his teeth in Charlie's coat collar, and in half a minute had him in shallow water, where the boys could drag him out. That evening when the doctor had come down from Charlie's room, and had said that he would be all right in the morning, and the boys had told him again how quickly and how well Bob had acted, the doctor patted the dog's curly head tenderly, and turning to Mark, said, "Now do you see, my boy, why I told you never to lie to a dog?"—*Youth's Companion*.

"THE daughter of a village doctor was complaining to her father of the drudgery of the home work. The doctor pointed to some empty bottles and said: 'These bottles are of no value in themselves, but in one I put a deadly poison, in another a sweet perfume, in a third a healing medicine. Nobody



cares for the vials it is that which they carry which kills or cures. Your daily work, the dishes washed or unwashed, or the floors swept, are homely things, and count for nothing in themselves; but it is the anger, or the sweet patience, or zeal, or the high thoughts, that you put into them that shall last. These make your life.'"

In Apple Harvest

"OH Anna the Jonathan apples are ripe, let us go and gather some," said Eddie Hart, as he came bounding into the room where his sisters, Anna and Laura, were busy at work one beautiful morning in early autumn time.

"Me do too," prattled wee little Mabel from the corner where she sat building a block house.

"Yes" replied Anna; "we will all go, and fill a basket with the nice mellow fruit to surprise Aunt Nellie when she returns from her drive."

It did not take the children long to reach the tree; and while Anna, who was the tallest, picked the luscious fruit, Laura filled the basket, and Mabel gathered all her little hands could hold. Eddie, with his pockets and arms full, began to eat the tempting fruit.

"Oh Eddie!" said Laura, "you ought not to eat the apples now, you know mamma does not like to have us eat between meals."

"It does not matter if we eat apples, does it Anna? Everybody eats apples when they want them."

"I do not believe mamma would want us to eat them except at meal time; but Aunt Nellie has returned, and we will go and ask her about it," replied Anna.

Aunt Nellie, who was keeping house with the children while their papa and mamma were away on a visit, loved her nephews and nieces very much, and was ever ready for a talk with them; so when Eddie asked her to tell them if it was wrong to eat apples between meals, she said: "Yesterday I heard a little boy say that he did wish people would not be all the time asking him to run on errands; for from morning till night there were so many things wanted he could scarcely get a moment's time to rest or play. Now, I suspect your poor stomach would offer the same plea, if it could talk. God did not intend it to work all the time. He made it to do a certain amount of work, which it is necessary it should do in order to keep your body well and strong; but when that work is done, it needs to have a chance to rest, just as much as you do after you have taken a long walk.

"After you have eaten your breakfast, it takes your stomach and its helpers four or five hours to take care of the food you have put into it. It has to sort it over, churn it up, and do a great deal of hard work before it gets it disposed of. You know your food is

used to make blood, and has to be taken to pieces, and fixed over a good deal before it is ready for use. Now, as I said before, it takes four or five hours for the stomach and its helpers to fix over your breakfast, and sometimes even longer, according to the things you eat; for it is a good deal harder work to digest some foods than others.

"If we eat anything an hour after breakfast, the stomach and its helpers will have to work on that, and fix that over just the same as they did the food we ate for breakfast; and then the curious thing about it is that it will have to begin at the beginning of the process, and do with that just the same as it did with the breakfast. Thus the poor stomach is obliged to work a great deal more and a great deal longer than it ought to; and if we keep on eating thus between meals, the stomach will have to keep right on working; and by and by it will get so tired out that it will not do its work well, and the little boy or girl who owns it, will become sick.

"It does not make any difference at all what it is that you eat between meals, whether it is apples, or candy, or cake, or something else. Anything you eat, even just a little taste, will have to go through this whole process of digestion, as it is called, just the same, though for some things it will take a much longer time than for others."

"Well," said Eddie, "I never knew before that it was treating my stomach so badly to eat an apple between meals, but after this I shall take care not to eat any more."—*E. E. K.*

Observant Tigers.

BEFORE the arrival of the Russians in the neighbourhood of Vladivostok it is said that the tiger was king of the forest in that district. The natives looked upon the animal as a god, and if they met one they threw themselves on their knees, awaiting their fate without thought of resistance. When the Russians came they not only destroyed the favourite haunts of the tigers by clearing off the trees, but made active war upon the animals. Then, it is reported, the tigers began to discriminate between white men and natives, attacking the natives as before, but avoiding the white men.

Milk in Chunks

IN the winter-time in Siberia milk goes to the buyer in a chunk instead of a quart. The people buy their milk frozen, and for convenience it is allowed to freeze about a stick, which serves as a handle to carry it by. The milkman leaves one chunk or two chunks, as the case may be, at the houses of his customers.

The children in Irkutsk, instead of crying for a drink of milk, cry for a bite of milk.

The people in winter do not say, "Be careful not to spill the milk," but "Be careful not to break the milk." Broken milk is better than spilled milk, though, because there is an opportunity to save the pieces.—*Selected.*



The Explorers

IT'S ho, for the gallant "Polly!"
 And ho, for the sturdy crew:
 The ship is manned and the voyage is
 planned
 That will lead to regions new

Then far across the meadow
 A careful course they keep;
 And with eager eyes they scan the skies
 For the perils of the deep.

And not the great Columbus,
 When he crossed the ocean blue
 Or a "Viking" bold in days of old,
 Had heart more staunch and true.

And all of their adventures,
 Before they turned about,
 No book would hold—if all were told
 And nothing good left out.

—John Clair Minot.

Chats With the Doctor.

[Send questions for this department to the Medical Superintendent, Sydney Sanitarium, Wahroonga, N.S.W.]

1.—Middle-Ear Disease—“ I have suffered with discharges from one ear, more or less, as long as I can remember. The ear used to be very painful when I was young, but for the last fifty years there has been no pain whatever. The discharge has increased very much during the last few months. I got a liquid to drop into the ear which fizzes up like soda and acid. This keeps the ear clean, but if I stop using it for a day or two the discharge is as bad as ever. I am totally deaf in that ear.”

This story of how deafness develops is an old old story to the doctor. Our deaf man is perhaps threescore years old, and we will suppose that his trouble began when he was six or seven. As an infant his nose was obstructed, and was more or less constantly discharging. He suffered from colds in the head, following which would come earache. After an unusually severe bout of pain and inflammation in the ear, something happened—the drum-membrane ruptured, and a yellowish discharge came away. From that time onward there continued at intervals to come from the ear a watery, yellowish discharge which was sometimes very foul smelling. Dulness of hearing developed, and, after many years, total deafness. That, in brief, is the story. And for the sake of others with bad ears—for this case can hardly be cured—we will ask and answer briefly a few questions:—

1. Can earache in children be prevented?
2. Might this case have been cured during childhood?
3. What could have been done for this man to prevent entire loss of hearing through the destruction of the middle ear.

To the first question we may answer, Yes. Earache in children is preventable. Prevention consists in the avoidance of inflammations and infections of the nose and throat, and the child that is intelligently cared for does not suffer from such inflammations. Congestions of the nose, throat, and middle ear, with subsequent inflammation and infection, may be avoided by means of judicious bathing, equable clothing, out-of-door living, adequate in-door ventilation, and due atten-

tion to the diet and the condition of the bowels, the great eliminative organ. By such measures “colds” and “catarrhs” will be prevented, and these are responsible for fully half of the cases of middle-ear disease. Adenoids, post nasal growths, cause many cases of earache, middle-ear diseases, and deafness—perhaps one fourth of all cases. The remainder result mainly from inflammations of the kidneys, skin, and mucous membranes, such inflammations as are present in scarlet fever, measles, diphtheria, pneumonia, and other infectious diseases. It will thus be seen that the prevention of middle-ear affections consists in the avoidance of colds and catarrhs, the removal of post-nasal growths, and the skilful management and nursing of cases of infectious diseases.

The second question, like the first, may be affirmatively answered. Middle ear disease in children can be cured by wise, patient, painstaking effort. When a child complains of pain in the ear, he should be put into bed and a hot water-bottle placed to the ear. Heat thus applied will give at least partial relief, and so allow for the performance of other important procedures. One of these is the thorough disinfection of the ear by the instillation of warm carbolic lotion one to twenty. This may be gently poured into the ear with a teaspoon, then caused to run out by turning the head to one side, this procedure being repeated a dozen times or more in as many minutes. The carbolic lotion relieves pain by virtue of its warmth and the anæsthetic properties of the acid. At the same time it destroys any germs which may be present in the outer ear. After the carbolic cleansing, gently introduce a light plug of sterilised cotton wool which has been wrung out in 1 to 2,000 per-chloride of mercury solution. The auricle should be filled and the ear covered over with dry sterilised cotton, which is retained in place by a bandage. Over this sterile cotton dressing dry heat may be continuously applied by means of the hot water bag. A small blister is often applied behind the ear. After the ear has been dressed, attention should be given to the bowels, which are best cleansed by means of an enema. The diet should be light and very simple. As the inflammation has spread from the nose and throat up the Eustachian tube to the middle ear steam

inhalations are useful. The warm vapour may be medicated by dropping tincture of benzoin into hot water. In a case of acute catarrh, the patient should be free from pain in six or eight hours. If it lasts longer, it is likely that an abscess has formed in the middle ear; if so, this will burst of itself through the ear drum, or the ear drum may be lanced by the surgeon, and the discharge allowed to escape. In either case the discharge should be gently wiped away with sterilised cotton wrung out of the per-chloride solution, a fresh plug being gently reinserted every five or six hours. In many cases under this treatment the discharge soon ceases. In a few other cases the discharge becomes very profuse, necessitating frequent changing of dressings and cleansing by gently syringing with warm boric acid lotion. Fomentations may be frequently applied to relieve pain. When the patient is free from pain, gentle inflation of the middle ear should be practised. This is accomplished by tightly closing the nose and mouth and blowing, not too forcibly, however.

A child who is subject to frequent attacks of earache should be examined by a physician. If adenoids or other post-nasal growths are found, these should be removed. Nasal catarrh should also receive appropriate treatment.

In answer to the third and last question, we must say that the degree of success attained in treating chronic discharge entirely depends on the amount of damage done to the middle ear by the inflammation and infection. In long standing cases the ossicles of the middle ear may have been partly or completely destroyed. Treatment consists in syringing the ear night and morning with warm boiled boric acid lotion, half a pint being used at each treatment. The syringe used should be boiled before use. If the discharge is very offensive, one to 5,000 per-chloride of mercury solution may be used instead of the boric acid lotion. In some cases hearing is improved by the use of an artificial membrane; that is, a cotton-wool wick about an inch in length, which is wrung out of warm boric lotion and gently placed in the ear in such a manner that the inner end touches the remains of the drum-membrane or the little bones of the middle ear. This artificial membrane should be worn but an hour or two a day at the beginning. If it improves hearing and does not cause pain, it may be left in longer, until finally it can be

worn throughout the day. It should always be removed at night. A surgical operation is sometimes required to remove dead, decaying bone in cases which have lasted for years. The liquid mentioned which "fizzes like soda and acid" is peroxide of hydrogen. This is sometimes used instead of per-chloride of mercury solution.

2. Varicose Ulcer.—O. K. has suffered for years with a varicose ulcer on the leg. Nothing seems to do it any good, and she has lately had great pain with it. She is sixty-five years of age, and has always been an active hard worker, spending sixteen to eighteen hours on her feet every day.

Ans.—The cause and cure of this varicose ulcer is apparent. The veins in the legs have become dilated by prolonged, continuous standing. Finally, a slight scratch or injury has broken the skin and caused an ulcer to form, and the standing has kept it from healing. The cure consists in lying down with the leg elevated the greater portion of the time until the ulcer is healed. The ulcer may require to be stimulated by being scraped, and afterward with hot and cold water, which is poured in alternation over the leg. After the ulcer is healed, the support of a flannel bandage made elastic by cutting on the bias may be required for a time. During the warm weather a loosely woven cotton bandage having a little elasticity is better than wool. Rest with the legs elevated is the principal point in treatment.

3. Frequency of Head Shampoo.—M. A. asks if once a week is too often to wash the head; also best temperature of water to employ.

Ans.—Once a week as a general rule is not too often to shampoo the head, though some scalps do not require so frequent washing; others, more frequent. Warm water is best used for cleansing, a little baking soda being added if the water is hard. Any good, mild soap may be employed. After cleansing, rinse by pouring hot and cold water alternately over the scalp. Finish with cold. This treatment stimulates the scalp, increases its blood supply, and improves the nutrition of the hair. Dry thoroughly with a rough Turkish towel, and rub the scalp well with the tips of the fingers. Then brush and comb well.

4. Stuttering.—A. A. M., of New Zealand, asks for advice as to treatment for a boy aged three who stutters.

Ans.—The treatment of "stuttering" or

stammering in a child so young consists principally in the removal of obstructions to a free and even flow of air through the upper respiratory passages. The child likely has post-nasal growths or some other obstruction in the nose or throat. This should be removed without delay. Then he should be taught to breathe deeply and easily through the nose and to speak slowly and calmly. Teach him to take a deep breath before beginning to speak.

5. Refreshing Summer Drinks.—A country girl asks how to make a refreshing summer drink without the use of injurious acids or other objectionable ingredients.

Ans.—By far the most wholesome and refreshing summer drinks consist of fruit juices and water. Fresh lemon or lime juice and water in proper proportions cool the blood and quench thirst more effectually than any other drinks. If a soothing drink is desired, oatmeal, barley, rice, or other cereal waters may be used instead of plain water in combination with the fruit juice. The habit of sweetening these drinks by a liberal addition of cane sugar is to be deplored. They are thereby robbed of their virtue and may even become injurious. Honey may be used instead of sugar.

6. Hot Weather Teas.—Kindly suggest some cool refreshing dishes for the evening meal.

Ans.—Delightful summer dishes are provided in great profusion by Dame Nature. These are furnished ready to serve cooked by the sun out of doors instead of in a hot, stuffy kitchen. Find your teas in orchard and garden, and eat them under the trees. What could be more appetising than the luscious fruits of the season! These are delicious by themselves, or in combinations as salads. Then there are the garden products, tomatoes, lettuce, and such like. With these may be eaten one or more of the excellent, ready-cooked foods. We would suggest corn flakes, granose, wheatmeal and other biscuits, and sandwiches made from nut meats. Excellent recipes for suitable summer dishes will be found in the household department.

*Phone 664 B.

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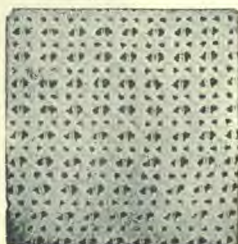


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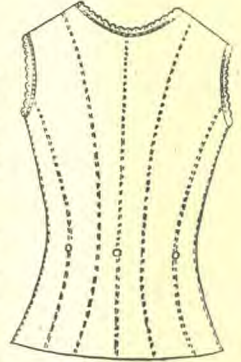
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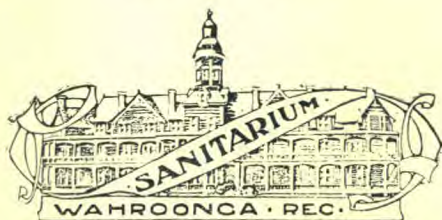
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