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A brief respite.

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IN THIS ISSUE:

EDITORIAL

FAIR COMPETITION

FAIR competition in any situation in life is an element that tends toward human enjoyment and welfare. Games involving competition are favoured and promoted by educational institutions as a means of developing character. In business, competition is often a spur to efficiency and good management which will give patrons the greatest possible value for their money and an inhibition to the taking of unreasonable profit. Competition frequently will enforce fairness in dealing where character alone will not induce it. Drives for aid to the victims of some great disaster such as an earthquake or fire, often give participants extra zest, and spur their efforts when they are organized on the basis of friendly competition. Workers in large manufacturing institutions have in some instances greatly enhanced their output when organized in groups competing with one another, and have turned their labour from drudgery to enjoyment.

Any honest and fair-minded person in whatever walk in life will defend the right of fair and honest competition, for it is an element in human enjoyment and welfare. An athlete who competes only with himself will not develop his prowess to the same degree nor enjoy his exercise as much as when competing with others who are about his equal. Meeting competition honestly and fairly tends toward efficiency, success and general welfare.

But there is much in the world that will not or cannot endure competition and thrive. Much of the world is ruled by brute force, violence, and terrorism instead of reason and intelligence. Any business organization or system of government or religion or whatever it may be, that will brook no competition once it has acquired power to suppress it, is a bane to the world. It is a bad being that cannot serve the world for its greatest good or enjoyment. Creatures of this character in the form of governments and religions have waxed and waned, and the baneful effects of their existence are now a matter of regrettable history. But there are still many more like them, and their number seems to be increasing as time goes on. Among them may be mentioned such governments as those of Hitler, Mussolini, pre-war Japan, Communism, some labour unions, and certain powerful groups of followers of religion. Though these oppose one another they are not averse to employing the same methods and means to overcome opposition or competition against themselves.

The spirit is one and the same under different forms and their character of the same ilk. Their philosophies and doctrines make it a criminal offence to differ from their policies or to dissent from their doctrines, and when they are in power, imprisonment, loss of property or even death is the penalty.

There are countries where religion is a monopoly of the state, where dissent is not tolerated or if tolerated at all is made an almost unbearable experience; for liberty of conscience and freedom of expression would jeopardize the appearance of prosperity of religion protected by civil might. Such religious groups fear the logic, truth and peaceable persuasion of minorities who do not conform, for truth is mightier than the sword, wherefore truth, logic, and reason, are suppressed with terrorism, brutality, and persecution generated in vicious minds. Such powers exercise the brute might of beasts but not the power of manly character which meets competition in a fair and manly manner. Terrorism, brutality, torture and persecution are the means employed by brute characters to achieve their objectives. They are bad systems even though they be the majority and have acquired the brute might to impose their will on majority and minority alike to the detriment and suffering of mankind.

Groups of this character work with cunning and subtlety when they are in the minority and before they have acquired power, in order to deceive and to put the unwary off their guard. They pretend to be concerned about the welfare and happiness of the people, profess great loyalty and patriotism, and ostensibly conform to law and order until power to control has been acquired. They make the appearance of being honest, fair and sympathetic where there is corruption and indifference to the welfare of the people, but once they get the power to control their real character is revealed, their fangs bared and their claws uncovered.

In countries where governments of this character are in power men and women are arrested for no crime other than the suspicion or dislike for them by some government agent; convictions follow without trial or opportunity for defence and sentences are executed for no offence other than dissent, competition, or indifference to policies and practices of the ruling power. Courage to express conviction or sometimes merely refraining from joining a fawning group of sycophants whose submission has its basis in fear, is a punishable offence. It is a crime to ask for information or explanation of reasons for arrest. There is no freedom quietly to go about one's business letting others do the same. The fictitious virtues of government must be loudly proclaimed, and one who refrains thereby becomes an offender subject to confiscation of goods and loss of liberty. There is no right to hold property privately, to choose work or vocation. It is a crime to exercise independence of

thought and to have religious conviction. Where systems and creatures of this character have acquired power they scoff at the promises which they made while they were small and weak. The promises were not made to be kept but merely to serve as baits and traps to catch those sufficiently naive to have believed that they were genuine. Minorities are temporarily encouraged, but later ruthlessly suppressed, and all worth of the individual is denied. Only as he fits into the system without opposition or competition is he accorded any rights.

Suppression of fair and peaceable competition is a denial of human rights. It is a denial of the right to persuade by reason and dissemination of knowledge. To suppress competition by brute force and violence and persecution is as wrong and as bad as to compete by such means. Those are the spirit, the methods, and means of hoodlums, gangsters and other criminals, and when men in positions of power resort to their use to overcome fair competition and to suppress knowledge and truth and reason they assume the character of giant gangsters. And when their violence is directed against inoffensive and lawful minorities they liken themselves to the big bully who robs the little child of his rightfully possessed sweets. In some countries today religion manifests this character as much as communism does in other countries.

Individuals who make it their business to foment discontent and rebellion against constituted government, and who illegally, whether openly or secretly, endeavour to destroy law and order, are rightfully subject to restraint and punishment by process of law. But calling attention to corruption and abuses in high places and producing proof of the same is the lawful right of all citizens. Suggestions for improvement, appeals for relief from oppression, or even proposals to abolish that which is and to substitute that which is believed to be better should jeopardize no one's liberty or possessions. But much of the world is in the grip of powers that will brook no competition. Communism can meet competition only with brute force and violence. Other forms of government and many religions have employed such means, and many still do so. They may for a season hold the masses in their grip by sheer force and brutality, and thus greatly enhance the misery of the world. Any organization or system or philosophy that denies mankind the right of fair competition, or which cannot or will not meet it by fair and manly means, is a bad organization or system which is a bane to the world.

Water

65,000 gallons of water weighing 270 tons are needed to process one ton of steel.

Fur

Imitation wolf fur is being made from nylon fibres to meet the shortage of wolf furs which are in demand by air force soldiers in Arctic regions. The new synthetic is said to rival its natural counterpart in lustre, softness and wearability. The cost is one fifth that of the natural fur.

Language

It is said that 2,796 different languages divide mankind into groups, many antipathetic or hostile to one another.

Paper

An Uruguayan paper-making expert is reported to be making a ton of newsprint from two tons of rice or wheat straw by means of a new process which he has recently developed.

DDT

An increasing shortage of DDT and other chlorine based insecticides, coupled with sharply rising prices, is threatening the collapse of the world-wide campaign against insect-borne diseases, according to a report from the offices of the World Health Organization. Production in the United States cannot meet the demand. Neither can the smaller and more expensive production in Europe meet the deficit.

Milk

Milk has been found to be an excellent plant food which increases production considerably when applied to the soil.

Korea

Korea is an important mining country producing iron, tungsten, molybdenum, graphite, manganese, aluminium, cobalt, nickel, copper, lead, zinc, and other ores.

Insurance

Lloyds of London, the world's most famous insurance firm, handles no life insurance.

Train

In September 1950 two locomotives pulled 206 wagons loaded with 15,000 tons of coal from West Virginia into Toledo, Ohio, U. S. A. The train was nearly two miles long.

Chemistry

"If this age survives long enough to be called anything," says "Public Opinion," "it will probably be known as the chemical age. No sooner does some sad, scientific sage announce that we are desperately short of something, than up pops a chemist and reveals that he has produced a perfectly good synthetic substitute."

Saucers

It is announced on behalf of the U. S. Naval Research, that the "flying saucers" which excited so much comment within the last year or two were actually "enormous sounding balloons," which were being used for research. Now that "project saucer" has been discontinued, there is no longer need for secrecy on a scientific basis.

Cruelty

An association dedicated to the punishment of persons guilty of cruelty to animals has been formed in Denmark. Already several cart drivers found cruelly beating their horses have been soundly whipped by the organized animal lovers.

Hexaplets

In Lemu village, East Pakistan, Mrs. Irfanuddin, aged twenty-five, gave birth to six babies, "hexaplets," all of which survived for about forty-eight hours and then died.

Master Clock

Twenty-four hours a day periodic time signals are sent by the United States to thousands of radio-receiving points in the Western Hemisphere, Asia, Africa, and the Far East. These im-

pulses are carried by more than 200,000 miles of American telegraph lines to keep the nation "on time."

Called peeps, the signals are transmitted every two hours day and night during the last five minutes of the even hours. Their source is a master clock in the U. S. Naval Observatory, located on one of the highest sites above sea level in Washington.

In measuring the passage of twenty-four hours, a naval astronomer watches each night for a certain star, sighted the previous night, to reappear at a given point in his telescope. If the master clock disagrees with the astronomer's finding, the clock discrepancy is corrected—even to a thousandth of a second.

Motoring

American motorists are driving over short sections of roads that are marked temporarily by the bright coloured, cartoonlike signs of Europe's international highways. At the same time motorists in France, Chile, Turkey, India, and Southern Rhodesia are using sections of roads marked with the yellow-and-black curlicues, curves, and angles of the American highway markers. It is all a part of the U. N. safety tests to determine how the two systems of road-marking might be better adapted for world understanding.

Farm Journal

The world's first farm bulletin has been found by an archæological expedition of the University of Chicago Oriental Institute and the University Museum of Philadelphia. Written in cuniform script in the Sumerian language on a clay tablet, the instructions to farmers are believed to be 3,700 years old.

Thunderstorms

At any given moment there are about 1,800 thunderstorms in progress all around the earth according to Dr. Robert E. Holzer, Professor of Geophysics at the University of California. These storms recharge the earth's electrical field and keep it healthfully "negative."

Ball Pens

The U. S. State Department has banned the use of ball-point pens for official business, because the ink or other writing fluid lacks permanence.

Population

According to Dr. Julian Huxley the world's population is increasing at the rate of 40 per minute.

Sweet Potatoes

One medium sized sweet potato gives at least one third of the vitamin C needed for a day, according to nutritionists. Oranges and other citrus fruits are also excellent sources of this vitamin.

Webs

Scientists say that in proportion to its weight spiders' webs are stronger than steel.

Voices from prison speak from experience on the matter of criminal offences springing spontaneously from drinking situations. The following personal statements on the relationship between their drinking liquor and their offence were made to the editor of an outstanding journal. All were in prison.

* * *

No. 21923. "My advice to all young men is to leave drink alone. . . . Every good opportunity I ever had has been lost through drinking."

* * *

No. 21969. "Most of my drinking has been social drinking. I have no specific craving. I am certain, however, that if it had not been for drink, I would not be here."

* * *

No. 21991. "I was very drunk and did not know what took place. I do not even know if I am guilty or not. I have never been in trouble when I was sober, only when I am drinking."

* * *

No. 22060. "I was under the influence of drink at the time I was arrested and had been drinking heavily. Alcohol has been involved every time I have been in trouble. . . . Once I start to drink I can't stop."

* * *

No. 22075. "Every time I get drunk I get in trouble. I have never been in difficulty but when I have been drinking. . . . Better leave drink alone if you want to live happily. I have lost my home, my car, my family, because of liquor."

* * *

"Exceptionally few persons who become habitual drinkers are ever able of their own volition to break the habit, because alcohol weakens the will power."

I ONCE met a man about fifty-eight years of age who was a railway locomotive driver. The railway company for which he worked had a rule that no one whose blood pressure exceeded one hundred and sixty could continue to serve as a driver. The rule was in recognition of the possibility that a driver with high blood pressure might sustain a stroke while on duty.

The driver was in very good general health. He was not overweight, his muscles were in good condition, and he had not been losing time because of illness. He had worked for the railway company for many years and was within two years of the time when he could retire with pension. But he had begun to worry, a year or two before I saw him, about the possibility of his developing high blood pressure and thus being disqualified from service as a driver before he reached the time for his retirement. The railway required its drivers to have periodic physical examinations.. For years this man's blood pressure had been between one hundred and thirty, and one hundred and forty. But after he became anxious about the possibility of high blood pressure, his pressure began to rise slowly. At his next examination the reading was one hundred and fifty. This slight increase tended to alarm him, and focus his thoughts on his blood pressure. The next time he was examined, the reading was one hundred and sixty-five. And so the company doctor sent him to the hospital, hoping that he might receive such treatment as would reduce his blood pressure and enable him to fill out his remaining two years of service for the railway company.

The interesting thing about the driver's case was that his blood pressure did not stay at one hundred and sixty-five all the time. When readings were taken on the spur of the moment, they were about one hundred and forty. But when the patient knew in advance that his blood pressure was to be measured, the readings were consistently higher. The problem in this case, then, centred around helping the driver to overcome his worry.

Worry is a form of fear, and fear is an intense emotion which has definite effects on the organs of the body. When a person becomes afraid, the physiological effects of the fear prepare him to meet an emergency. You were able to observe

THE EFFECTS OF WORRY

HAROLD SHRYOCK, M.D.

these effects even when you were a child. Perhaps you were on your way home from a neighbour's one dark night, when you heard a rustling in the leaves just a little way from where you were walking. Your childish imagination prompted the thought that some animal was slipping up behind you. You became fearful and broke into a run which brought you home more quickly than you had ever come home before. By the time you arrived home, your heart was pounding and you were breathing deeply.

While you were running home you had not felt tired. But after you had had time to regain your composure, you began to feel weary. Actually you had been able to run faster and farther than under ordinary circumstances. This was because your response to fear had prepared you to meet the emergency. Had it been possible for a physician to examine you at the time of your fright, he would have found that your blood pressure was elevated, and that the amount of blood sugar (energy food) in your blood was much greater than usual. In addition, there would have been evidence that your digestive organs had ceased their functions during the period of your fright.

These various effects were for the purpose of enabling you to protect yourself. With higher blood pressure, faster heart, and more blood sugar available, your muscles were able to act quickly and powerfully. The paralysis of your digestive organs was for the purpose of conserving energy, for the time being, while your body was involved in an all-out attempt to escape from danger.

The organs of the body respond to fear and worry according to this same pattern regardless of whether the fear results from the rustling of leaves on a dark night, or whether it results, as in the case of the driver, from worry over possible loss of employment. This was the reason that every time the driver became anxious over his blood pressure, the reading went up.

In the case of a child who is frightened on his way home on a dark night, the blood pressure returns to normal as soon as his fright vanishes. Even in the case of the driver there were evidences that his blood pressure did not remain above one hundred and sixty for any long period of time. Our bodies are designed in such a way that when worries persist for long periods, the effects on the organs tend to become permanent. The driver was therefore laying the foundation for chronic high blood pressure simply because his worry was persistent.

Dr. Hans Selye, Director of the Institute of Experimental Medicine and Surgery at the University of Montreal, has carried on some masterful research studies which provide a new insight into the manner in which chronic disease can result from worries and anxieties. Dr. Selye has observed that the various kinds of stresses (physical or mental) have about the same influence on the organs. Stresses exert their influence through the intervention of the pituitary and adrenal glands. These glands produce chemical substances which are carried by the blood stream and which serve to place the other organs of the body on an emergency footing. This provision works very well so long as the stress factor is not prolonged.

Under conditions of prolonged stress, such as a condition of worry extending over a long period, the chemical substances produced by the pituitary and adrenal glands exert harmful influences. Peptic ulcer may be caused by just such a mechanism. A prolonged stress, even of an emotional nature may produce damage to the kidneys. This, in turn, may cause the damaged kidneys to produce a substance which causes a contraction of the blood vessels throughout the body, bringing about chronic high blood pressure. Another possible systemic effect of prolonged stress is the stimulation of the growth of connective tissue. This, according to Dr. Selye's experiments, may lay the foundation for arthritis.

Worry has definite effects on the organs of the body and destroys health.

Recognizing, as I believe you will from the preceding statements, that worry can have the effect of destroying health, it is proper for you to ask, "What can I do to prevent worry?"

Worry is a form of phantasy—a kind of make-believe. The person who worries says to himself, "How terrible it would be if such and such were to happen!" Actually, this terrible thing has not yet happened—it is only a possibility.

The first step in the control and prevention of worry is to recognize it for what it is—a form of phantasy. Once the individual understands that his imagination is playing an unpleasant trick on him, his

situation will be robbed of half its terror. The realities of life are bad enough without spending nervous energy in worry over things that have not happened.

A second suggestion for the control of worry is to adopt and cultivate an attitude by which life is accepted as an interesting challenge. You should say to yourself, "Uncertainty is what makes life interesting. If I knew in advance everything that is going to happen, half the fun of living would be subtracted. Bring on the surprises—good fortunes, tragedies, or whatever they are—I have always been able to make adjustments in the past; I can do it again in the future."

And if our tendency to worry continues in spite of the self-administered psychotherapy suggested above, Then I have a third suggestion. Take a pencil and paper and deliberately write out a statement of your worries. As you see this statement take form before your eyes, some of your worries will disappear just because they seem so unnecessary. But writing a statement also has the advantage of stimulating you to devise solutions to the problems which cause you to worry. Seeing your worries in black and white enables you to think things through impersonally. The worry comes out into the open, as it were, enabling you to attack it directly.

Another suggestion for the handling of worry is to seek out some wise person in whom you have confidence and ask him to let you discuss your problem. You can tell by the way this person reacts to your story whether he thinks your worries are well-founded or whether you are over-concerned. Making such an observation will help to orient you so that you can make a more logical approach to the problem. Furthermore, bringing another person into the picture increases your chances of finding a solution. Regardless of who it is, this other person will have some suggestions as to how your troubles may be eased.

Worry crowds in on a person's thinking when he is not busy. Therefore, another way to combat worry is to keep busy, thus allowing less time for worry. And if your activity is of a physical nature, it will benefit you by making you weary enough, by the end of the day, so that you will fall asleep. A good night's sleep will make you feel better the next day and will give you new courage to rise above the contemplation of your anxieties.

The last and best suggestion I have for the control of worry is to review your whole philosophy of life with the purpose of confirming your belief in a loving heavenly Father who watches over His human children and who permits only those circumstances to occur which are for their best good. Having adopted such a philosophy, you can face uncertainties courageously, realizing that "all things work together for good to them that love God." When your faith enables you to believe that God is looking after you, there remains no good reason for you to be anxious over what may come.

CORNEAL TRANSPLANTATION

Blind Can See!

RECENTLY Corneal Transplantation was performed by Dr. M. C. Modi on Mr. Muragaya of Chitladurg, 42 years old, who was blind due to corneal defect. A most successful result has been obtained in this case.

A part of the cornea of his right eye was replaced with an identical piece of the eye of an old lady whose eye was removed because it was painful and blind with retrobulber tumour. He was blind before operation but after Corneal Transplantation his normal sight was restored. This kind of operation is very rare in this country.

Compared with other countries the number of blind people in India is enormous. There are nearly one and half million totally blind people in India and about four million partially blind. Among them there are many blind due to corneal defects; so corneal transplantation will restore the sight of many blind persons.

The types of the eyes that are used for corneal transplantation include cadaver eyes of all ages, the eyes of stillborn babies, the eyes from living patients who required enucleation because of posterior segment tumours, or tumours of orbit, injuries, glaucoma, optic atrophy, etc.

One very serious drawback to the full use of the surgical knowledge and skill in this field is the inexcusable lack of corneas that should be grafted into the eyes of living blind persons. Everyone realizes that deaths occur every day in this country and that if the corneas could be removed from each of those, it would be possible to restore the sight of many blind persons.

People should arrange to donate their eyes after death and allow the corneas of their eyes to be used for transplantation to give sight to the living blind.

Post operative picture of a patient in whose right eye Corneal Transplantation operation was performed by Dr. M. C. Modi.

Eye Banks should be established in this country to collect, preserve and distribute corneal tissues from human eyes for corneal transplantation to blind persons who have lost their sight because of corneal defects.

The eyes taken from dead persons can be preserved in moist physiological salt solution, at a temperature of six degrees centigrade for 72 hours. The corneal tissues taken from those eyes can be used for transplantation. The eyes should be removed within six hours after death.

The technique of corneal transplantation is simple and the operation is performed under local anæsthesia within 20 minutes by Dr. Modi.—*Karnatak Ayurved Vidyapeeth Society, Khasbag, Belgaum.*

Exercise Can Be Fun!

QUITE often the word *exercise* calls up unpleasant visions of profuse perspiration, stiff muscles, and aching joints. Webster more or less supports this view, defining the term, "To set in action; train; exert repeatedly." Perhaps this notion of exercise and the setting-up drills that bring forth the painful reactions are a heritage from Puritan forebears, who believed that anything to be good must hurt, and the more it hurt the more good it was likely to do. Not many people welcome this view or its results; in fact, most are convinced as early as the second day of such a routine that surely the devils have been let in rather than driven from the body.

There seems to be something in our racial background that gives the body beautiful a potent appeal for most people. Certain so-called physical culturists have taken advantage of this more or less hidden but very human urge. Appeals to the normal instinct to glorify physical prowess are made through copious use of pictures of super-muscled men and beautiful women. Few can honestly deny that secretly they admire and respect these qualities. The common misconception which conceives of strength and health as being parallel, if not identical, conditions is also used by these individuals to snare gullible seekers after health. Another approach made by the exercise charlatans is to shroud their "systems" in mystery—holding them up as secret and unique methods. The same psychology has been used by quacks, witch doctors, and medicine men in peddling their wares to a credulous public since the dawn of recorded history.

No one questions the value of a vigorous, well-co-ordinated, and well-proportioned body. A moderate amount of regular exercise is necessary to maintain normal muscle tone and to stimulate proper activity of the other body systems; but muscular development for its own sake is patently absurd. A useful amount of strength and physical skill—enough to cope with our daily programme and some reserve—is desirable and even essential; but muscular monstrosities are totally out of place in modern society, and secret systems are utter humbug. Some activities are more vigorous than others it is true, but there is no magic formula to strength and beauty.

Yet there is an art to exercise. A good many of us, sensing something out of line with the armchair age, which has practically eliminated physical exertion while building up mental stress and strain to an almost unendurable point, would like to practise it. Dimly we remember the emotional release gained from joyous physical activity; the self-expression found in games and sports and the real pleasure of healthy fatigue following vigorous activity. We long to recapture these perceptions of our youth.

FRED V. HEIN, Ph.D.

The exercise you choose is of little importance as long as it is the right kind for you. And you don't need a gymnasium, an athletic stadium, or a country club for pleasant healthful activity. Some find that trappings help. Yet the twice-used, expensive equipment of some young friends of ours have been stored away for several years. On the other hand, the moderately priced, back-yard badminton set of our next-door neighbours makes its appearance with the beginning of good weather and never disappears. I know one executive and his wife who can enjoy their exercise only when garbed in the latest sports attire and in the high-priced environment of the golf and yacht clubs.

But things of this sort are merely auxiliaries at best. It is more important to understand, first of all, that exercise is an individual thing for each of us, as free as the air we breathe. No longer do we judge the merit of an activity by the amount of perspiration raised. Exercise should be fun. Obviously the first great step is to find some activity calling for a bit of physical effort, that you really like to do; for if exercise is not pleasurable play, one is unlikely to keep at it very long. If you have to force yourself to engage in it, it probably will be of little benefit anyway. After a fair trial, if an activity is still just exercise, it is time to try something else.

The list is almost inexhaustible: hiking, gardening, cycling, swimming, camping, riding, and a host of other such activities can all be good exercise and may be enjoyed alone or with the family. Some may find the answer in calisthenics, performed in the privacy of their own homes. Checking and recording progress can be very satisfying. For the younger set volleyball, softball, basketball, and other team games have special appeal.

Once you find something you really like to do, have a schedule for your play, and stick with it at all costs. It can be suggested to family and friends that at certain times you simply are not available; or better still, include them in your adventure into activity. Once you have the feel of exercise as a recreational refuge, you will seek it quite naturally and automatically. You begin to learn the pleasures of escape through wholesome physical recreation. You come to know the mental, emotional, and physical refreshment, and the renewed zest for the next day's tasks that satisfying exercise can evoke.

And now a word of caution before you go "all out." How long since you have had a health examination? An annual check up by your doctor is good preventive medicine that only you can prescribe—a must before you start an exercise programme. Life may begin at forty; but if you are on that threshold or even over thirty-five, you are likely to be more fat than fit. You need to avoid fast, prolonged activity and highly competitive sports, unless you're one of the rare individuals accustomed to them. And no matter what your age is, if you've been long out of training, you'll need to graduate your return to full activity. Remember "Easy does it."

Now what can you expect from exercise? We have agreed that it is no magic key to health, although suitable work, good nutrition, avoidance of excess, enough sleep and relaxation, and proper medical care, along with appropriate exercise, are the ingredients of a tried and true recipe. Intelligently planned exercise will aid in maintaining fitness longer than otherwise; resistance to illness may be increased and physical capacities conserved. It will help to furnish relief from the all-too-prevalent pressures of modern living; and, most important, it will provide added enjoyment in simply being alive.

THE COLA POISON CAMPAIGN

BY MEANS of newspaper, magazine, and medical journal advertisements, together with conspicuous sign-boards displayed along the public highways, the Cola distributors are seeking to educate the public into the belief that the poison, caffein, is a wholesome, harmless substance and may be used *ad libitum* without injury. We copy the following from a Cola advertisement which appeared in a medical journal:

"*Investigation by the Unprejudiced Scientist Has Proven These Facts*

"That caffein is a 'true' stimulant.

"That caffein has no secondary or depressant effect.

"That caffein is not habit-forming.

"That in its physiological value caffein is closely related to a food.

"That Cola is harmless—wholesome and beneficial."

Everyone of the above statements is absolutely false. The truth of each one is exactly the opposite of the statement made. In other words, caffein is not a true stimulant. Caffein has a decided secondary or depressant effect. Caffein is a habit-forming drug. Caffein is in no way related to foods. It is a poison, not a food. Cola is not harmless, wholesome and beneficial but on the other hand, is harmful, unwholesome, and poisonous in exact proportion to the amount of caffein which it contains.

The following authoritative statements with reference to caffein from scientific men of recognized standing amply show the falsity of the above statements made by the Cola producers and other statements which are widely published by them throughout the country.

Dr. H. H. Rusby, Dean of the College of the City of New York, Columbia University, and joint author of the *Standard Dispensatory*, says, "It is nevertheless true that caffein is a genuine poison, both acute and chronic. Taken in the form of a beverage, it tends to the formation of a drug habit, quite as characteristic, though not so effective, as ordinary narcotics. While not cumulative in substance, it is so in effects, permanent disorders of the cardiac function and of the cerebral circulation resulting from its continued use. When the caffein is taken in more concentrated and seductive forms, as in confections and the like, such as the 'stored energy' cubes sold some years ago, the danger of habit formation and the cumulative results become correspondingly greater."

According to Dr. Wm. N. Leszynsky, of New York, coffee is particularly poisonous to children, over-excites the brain and produces functional disturbances. He says, "I have often seen night terrors, insomnia, and tremulousness disappear after the withdrawal of coffee." He attributes to the use of coffee arrest of physical development, and tells of a boy six years of age who suffered from acute coffee poisoning, the symptoms of which were "active delirium, widely dilated pupils, tremor in the facial muscles and the extremities, and severe tachycardia, the pulse rate being two hundred beats a minute." The child also had hallucinations. These symptoms were produced by eating half an ounce of coffee beans. The boy was ill for a week.

Dr. Leszynsky also states that the transitory sensation of well-being which is experienced by many susceptible persons after taking a cup of coffee "is soon followed by a feeling of apprehension, general tremulousness, and indigestion." He asserts that the habitual use of coffee in such persons "invariably leads to persistent functional disorders of the nervous system, as well as disturbances of digestion."

During an English expedition to Ashantee, one of the officers lost one of his finest horses. He was greatly distressed about it. They had carried their tea and their shelled corn for their horses in bags. At one encampment they had nearly emptied a bag

of tea, and filled it with corn. The officer's horse happened to get the last of the corn in this bag, so that he ate the tea with his corn. He was seized with a wild delirium, and went plunging head-long, and finally threw himself over a precipice. That was the effect of tea on a horse.

The Medical Press some time ago called attention to the fact that coffee may produce effects similar to those induced by alcohol, among which are palpitation, a feeble pulse, trembling, twitching of the limbs, and other indications of profound poisoning. This fact is one to which coffee drinkers should give attention. The use of tea and coffee is only a respectable sort of tippling, the effects of which may be as injurious as those following the use of alcoholic drugs.

Dr. Norman Bridge, of Chicago, U. S. A., asserts that coffee drinking is a frequent cause of disease, and reports the history of seven cases in which many obscure and distressing symptoms were present. All of these patients recovered when coffee was discarded.

Edward Smith, the eminent English physiologist, once made an experiment for the purpose of testing the effects of coffee. He made a decoction of four ounces, and he and his assistant drank it. In a short time they became dead drunk and lay insensible upon the floor of their laboratory for three hours.

Dr. Gilman Thompson, Professor of Medicine in Cornell University Medical College, of New York City, asserts that the use of coffee to produce wakefulness at night "soon results in forming a coffee or tea habit in which the individual becomes a slave to the beverage" and when deprived of it, "suffers from languor, prostration, restlessness and craving." Two or three cups three times a day produce "muscular tremors, nervousness, anxiety, apprehension, palpitation of the heart, vertigo, heartburn, dyspepsia, constipation, insomnia, and emaciation."

Doctor Thompson well suggests that coffee users may discover the ill effects which have been produced by suddenly stopping the drug. The degree of craving experienced is an evidence of the damage which has been done and the influence which the drug has obtained over the system. He says that coffee is a poison and should never be given to children, in whom "coffee gives rise to insomnia, night terrors, nervousness, and tremor." Doctor Thompson also asserts that acute coffee poisoning gives rise to "excitability, with a tendency to delirium and tachycardia" (rapid beating of the heart).

Professor Buchheim, while a student with the eminent Professor Lehman, more than fifty years ago, was made the subject of an experiment with caffein, then a newly discovered substance. The results afforded the most convincing proof that caffein is essentially identical with creatinine a poison excreted by the kidneys and found in the urine. In these experiments it was found that ten grains of caffein (five ordinary cups of coffee) "will produce the most violent excitement of the vascular and nervous systems—palpitation of the heart, extraordinary frequency, irregularity, and often intermission of the pulse, oppression of the chest, pains in the head, confusion of the senses, singing in the ears, scintillations before the eyes, sleeplessness, and delirium."

The daily use of such a powerful drug is in the highest degree detrimental to health, slowly but surely undermining the constitution in the end and producing arteriosclerosis or hardening of the arteries, failure of the heart, cirrhosis of the liver, Bright's disease of the kidneys, abdominal dropsy, general dropsy, nervous prostration, failure of memory and doubtless in some cases insanity and even death.

Avoid beverages containing habit-forming and harmful drugs. Instead use milk and plenty of fruit juices.

Friedenwald, Professor of Diseases of the Stomach, in the College of Physicians and Surgeons, Baltimore, U. S. A., asserts that coffee in some persons produces nervousness, excitability, and insomnia."

Gautier, the great French authority, says that coffee produces nervous excitement, insomnia, hallucinations, pain in the heart, distressed breathing, weakness of the muscles, disorders of the circulation. He says, "One may become a caffeic (coffee drunkard) just as one may become an alcoholic or morphia maniac."

Here are some of the poisonous effects as described by Dr. John V. Shoemaker, M.D., Dean of the Medico-Chirurgical College of Philadelphia, and Professor of Materia Medica, as described in his great work on "Materia Medica and Therapeutics."

"Caffein paralyzes the absorbing power of the convoluted tubules (of the kidney). Small doses cause irritation of the digestive tract, venous congestion and hæmorrhoids.

"From a dose of twelve grains (three cups of ordinary coffee) Doctor Pratt experienced restlessness, sleeplessness, mental depression, and tremor.

(Continued on p. 17.)

ELIMINATIONS

FIFTH COLUMN

— R. Wilson —

NO OTHER organ of the body suffers more under present-day conditions than the kidneys, not excepting that grossly neglected companion, the large bowel. The pity of it is that the damage done is insidious and comparatively unnoticed; that is, until something goes wrong. And then, too late, the grievous fact is borne home. For this reason we shall speak of the kidneys as the "Fifth column," not that the kidneys themselves are to blame, for only too often, the fault lies entirely with ourselves.

The importance of this often forgotten organ can better be assessed when it is pointed out once again that while one can get along fairly well after the removal of one kidney—due, of course, to our Maker's wonderful provision against such an event—life without both of them would be impossible. Speaking as we now are in terms of elimination, the blood would slowly become so charged with toxic poisons that a sub-normal temperature would be followed by drowsiness and finally coma or unconsciousness, and death would supervene. Since this is true in the case of the loss of both kidneys, it is obvious that any condition in which the kidneys are injured or over-worked must be detrimental to health and well-being.

It cannot be stressed too strongly or too often that all the organs of the body benefit from rest, particularly from that kind of activity that accomplishes nothing whatever toward the economy or strengthening of the system. In this category one might well place the often heard suggestion that the kidneys need "flushing out," this advice being followed by the drinking of copious amounts of water. Well meaning as this injunction may be, and beneficial as water is in so many ways, it must be remembered that the delicate organism of the kidneys does not in any sense of the word compare with drain pipes! Excessive drinking of any liquid can cause the very condition it is supposed to prevent.

The kidneys lie thickly embedded in fat at the back of the abdomen, on either side of the spinal column. For the amount of work that they do they are not large, being roughly four and a half inches long, and shaped like a kidney bean. The composition of the kidney is very complex, as it is made up of many minute capillaries and tubes. The blood supply to the kidney is very large for so small an organ, the renal arteries taking the blood directly to the kidney structure. Resting on the top and shaped like a cocked hat is another little organ, called the supra-renal gland. This has nothing directly to do with elimination, but its function is so vital con-

cerning as it does the arteries and the heart, that life is impossible without it.

How do the kidneys work? No one seems quite to know. Many theories have been advanced, but there is not yet a clear presentation that is final. We do, however, know only too well what they do, and only too consciously become aware that all is not well in the inner man when they are not functioning properly.

The lungs, skin, and kidneys all function as expellers of liquids, but it is the prerogative of the kidneys alone to regulate the amount of liquid that shall remain in the body. While the skin is pre-eminently the heat regulator, the kidneys are the safety valve controlling fluids.

The waste from food that the intestines handle has never in the true sense of the word entered the body system at all. The incombustible waste from food can be compared in a clumsy sense to the ash that is thrown out of the furnace, but the kidneys handle matter that is from within the body, that is from the blood stream. This matter is largely nitrogenous, and results from the breaking down of the worn parts of the body which have been replaced by the nitrogenous foods that come from the proteins of our diet. All the time the blood is circulating it comes under the "searching scrutiny" of the cells of the kidneys. How the organ is able to retain albumin and expel these nitrogenous wastes is a mystery, but the fact is that the kidneys are able to do this and a lot more.

For instance, if the blood, or any other of the body liquids, contains too much of the necessary salts, then the kidneys are the channel through which these elements are removed from the body. Every time bodily movement is made, muscles are brought into play, and material—largely glucose—is burned up to provide the energy. Tissue likewise breaks down from wear, and needs to be renewed—largely from a protein base. These operations which are so essential if the living organism is to remain healthy, provide the kidneys with constant work.

It is the work of the kidneys to carry these wastes—which are almost all soluble in water—and any excess water, from the blood stream, and so assist in maintaining that balance within the body which is essential to complete health.

Now for the causes that lead to kidney breakdown.

Put into the simplest possible language, they are two-fold. First, overwork; and secondly the continual presence of irritants.

Over-work can be due to overeating, a very prevalent sin, even in these days of austerity! The continual intake of water without the necessary thirst is another contributing factor. As we have said already, all the organs benefit from rest, and this applies equally to the kidneys. Why not take the necessary liquids in the food eaten? Why do we mostly prefer foods that create thirst rather than salads and other naturally "wet" foods that dispel thirst, adding salts and vitamins at the same time. Among the wet foods that could well be taken more freely are all the salads in season, fruits—especially those that are native to our land—and vegetables—these latter cooked so that little if any of the vital salts are disposed of via the sink. Pulses and porridges are not wet foods, in fact they actually create thirst, needing more water during digestion to make them usable.

Contrary to popular belief, meat is not essential to the human being; in fact we are definitely better without it. The toxic matter and poisons left in the animal's body when life was taken, add a considerable burden to the kidneys when introduced into the system. Tea is another irritant to the kidneys as also is excess salt, and sugar and milk in strong combination. Drugs are another danger. For instance, carbonate of soda and aspirins, while they bring a certain amount of relief, remain to be handled by the kidneys, much to their detriment. It is this slow, insidious damage inflicted over many years without complaint, that constitutes the real danger. The "fifth column" is a menace not only because of the ultimate discomfort that it brings, but more so because it catches up on us at a time when we can least afford it, and by that we mean usually in later life. When the results of years of disregard for health come to take their toll, the help that science can give us —to use a popular phrase—is often "Too little and too late."

Excessive drinking, even of pure water, is injurious to the kidneys.

Flatterers are the worst kind of enemies.—*Tacitus.*

* * *

Ascend above the restrictions and conventions of the world, but not so high as to lose sight of them.—*Richard Garnett.*

Facts and Fancies . . . . . .

. . . . . ABOUT THE HEART

PAUL D. WHITE, M.D.

THE heart is a strong, tough muscle able to endure great physical strain for many years with little or no injury. A rough estimate of what the average adult heart can do in work accomplished in one hour is 3,600 foot-pounds. It is not a delicate organ, as are the brain and the liver. It has been too much feared and coddled simply because it does happen to be the most vital organ. Not only is it the most efficient muscle in the body, but it is very well protected in the thoracic cage. In a healthy person it tires much less readily than the skeletal muscles, and it is only rarely injured in accident.

It is practically impossible for a person in good training to exhaust a healthy heart even by most gruelling effort. Nervous exhaustion and muscular fatigue and collapse come first, and protect the heart, although their symptoms are often wrongly attributed to heart strain. Hence, the athlete's heart is mostly a myth.

There are undoubtedly, however, rare exceptions of persons endowed with heart muscle or neuromuscular mechanism (by inheritance or perhaps by a poor start in fœtal life or earliest infancy) not able to withstand the strain of severe athletic sport. It may be that marathon racing, gruelling cycle contests, four-mile boat races, and hard, fast skiing at high altitudes, carried on for years, hurt the hearts of these persons. Average sports, such as baseball, golf, and tennis, and even the hard competitive games of football, hockey, and basketball, do not hurt the heart, with perhaps two possible exceptions:

1. A girl or boy (say, twelve to fifteen years old) in the midst of his most rapid growth may conceivably strain the heart muscle by indulging in the three or four most strenuous competitive sports mentioned. There are two safeguards even here; namely, the greater vulnerability of the skeletal muscles and the lack of sufficient skill and endurance at these early ages to make the "first teams," which undergo the additional nervous strain of performing before large and excited crowds.

2. There may be heart injury in the case of an athlete acutely ill, most commonly from such infection as so-called grippe, who does not want to confess his illness just before some important contest because of his mistaken idea that he must not let his alma mater and his team mates down. The heart muscle, already somewhat poisoned temporarily by the infection, may dilate under the extra strain of the contest.

More research on the subject of heart strain is needed. Certainly the heart of the heavy manual labourer and of the farmer can remain in excellent condition through many years of the hardest physical work. The heart of the businessman or professional man, on the other hand, often becomes defective in middle age, doubtless in part at least because of the very lack of adequate healthy physical exercise.

Injury produced in accidents rarely hurts the heart. Even crushing injuries of the chest, including the milder "steering wheel" injuries, rarely damage the heart. This is because the heart, hanging from the blood vessels, is freely movable, and slips to either side with ease. Undoubtedly some cardiac accident-insurance neuroses have been fostered in recent years by the idea that the heart can be easily injured.

Battle or air-raid injuries, on the other hand, are another matter. Fre-

Farmers—and others who work equally hard—are not so likely to suffer heart strain as those whose work gives them little exercise.

quently casualties are due to actual perforation or penetration of the heart, but even here many lives have been saved by emergency surgical work to repair the condition.

There is much apprehension about the heart rate—fast and slow pulses—that needs to be dispelled. The usual normal range of pulse rate is 50 to 90 a minute; and even 40 at complete rest and 100 or more when excited are not abnormal rates. As a matter of fact, a heart can get along well for years at a rate as low as 30 and as rapid as 120 to 150 if it is in a reasonably healthy state otherwise. At rates of 20 or below or more than 200, trouble is likely to ensue unless the condition is only transient.

There is also much unnecessary fear of low blood pressure. Many persons have come to me complaining that their pressure is only 100 or 105 or 110. If they are otherwise healthy, I have always reassured them. The lower the blood pressure, within reason (that is, down as far as 90 to 110 in an adult), the less strain on the heart and arteries, and the longer the life. This fact has been determined especially by life insurance studies in the past thirty years. Insurers once hesitated to accept the low-blood-pressure candidates, but now, other things being equal, they jump to take them, as being good risks.

Now let us consider heart disease itself and various misconceptions in relation to it. There has been stirred up a great general alarm about the increase of this malady. Unwise publicity has caused much cardiac neurosis. It is true that the diagnosis is made more frequently nowadays than it used to be, but that is in large part at least to be explained by three simple facts:

1. There is a tendency in medical diagnosis to lump under heart disease various conditions that used to be otherwise labelled. For example, what was once called Bright's disease is now recognized as chiefly heart strain and failure, with resulting albumin in the urine, caused by high blood pressure.

2. There is a higher accuracy in diagnosis. Many cases once erroneously called acute indigestion are now recognized as being coronary thrombosis.

3. More persons are surviving the hazards of early life—particularly infantile dysentery, diphtheria, tuberculosis, and typhoid fever—to reach middle life or beyond, in which heart disease is naturally more prevalent. Perhaps our faulty modern way of life, with almost complete neglect of the ordinary simple rules of health, may add its toll of heart victims. More study of this problem also is badly needed.

It is important to realize that heart disease is not one disease, such as typhoid fever, any more than disease of the brain is one disease. If we break the expression down into simple terms, it becomes much less mysterious and terrifying. There are heart defects present at birth; acute and chronic rheumatic hearts; bacterial endocarditis (formerly the most fatal of all, but now, fortunately, curable in 80 per cent of the cases); hearts badly supplied with blood or with muscle actually damaged or destroyed because of hardening of their arteries; hearts damaged by syphilis (fortunately becoming rarer); hearts exhausted by many years of thyroid poisoning (also a thing of the past in advanced posts of civilization); and many, many lesser (that is, rarer or relatively unimportant) causes (such as anæmia) of abnormal conditions of the heart.

A few details about the most important kinds of heart disease are appropriately added here. There are the defects in the heart and large

(Continued on p. 17.)

Moderate exercise will not injure the heart. In fact it is very essential for the inside worker.

INTEMPER

TABLE

— H. W.

"HAST thou marked nature's diligence? The body of everything that takes nourishment dies, and is constantly reborn." These words of Leonardo da Vinci are used by Dr. Garfield Duncan to introduce his book *Diseases of Metabolism*. It is a good reminder to persist in one's efforts to achieve perfection, perhaps even the objective of an ideal weight. It is interesting to note that carbohydrates and fats, whether burned within or without the body, yield the same calories per gram; namely, four calories per gram, and nine calories per gram respectively. Protein yields four calories per gram within the body, which is less than without the body, because it is not fully assimilated owing to nitrogen excretion.

In contrast to physical effort, mental effort causes negligible increases above the basal rate. The basal metabolic rate of vegetarians and non-vegetarians shows very little difference as measured by oxygen consumption during stated periods. The normal range is said to be plus or minus fifteen. The ideal weight is about as follows, according to height: one hundred pounds for the first five feet, five pounds for each additional inch, ten pounds additional if you are heavy-boned, and an extra ten pounds for men. This corresponds to the weight you were when about twenty-five years of age. The advantage of keeping the weight normal is that you are less susceptible to the degenerative diseases such as premature hardening of the arteries and its complications, also diabetes. As the saying goes, "the lifeline is inversely proportional to the waist line." Too rigid dieting is like going on a high-fat diet, since body-fat stores are mobilized. This in itself has resulted in undue strain on the circulatory systems of some persons, and has cast some approbrium on dieting. A weight loss of two to four pounds a month is considered a safe programme for older individuals. The younger person, is rarely satisfied with anything less than two to four pounds a week.

On an under-nutrition programme the patient may actually gain weight owing to water retention. The patient will eventually lose at a predictable rate if the diet is adhered to and standard measures are used. Persons with heart disease particularly stand to gain by weight reduction where they are obese. Thyroidectomy has been considered in extreme cases to conserve body energies by reducing metabolic rate—a similar drop in basal metabolic rate of minus twenty or minus thirty has been accomplished by weight reduction.

If over-eating is a moral evil because of its damaging effects upon the body temple, its origin can be likened to that of other moral evils; namely, ignorance, habit, and wilful disregard of nature's laws. In the latter category are the so-called "food drunks." Over-eating does in fact cause a mild intoxication.

The mental attitude may mean the difference between success and failure. Obesity is no longer an evidence of health and prosperity as it may have been during the depression. Neither does it add to one's beauty as it is said to have done in the days of ancient Greece. Hunger is a wholesome state. The masters advise us to interrupt eating far short of satisfaction instead of continuing beyond by the taking of desserts. In fact it is said that desserts are made tasty because if they were not so enticing no more would be eaten at that stage of a meal. One authority goes so far as to say that they have no place in the normal dietary, that they should be considered a rare indulgence reserved for special occasions or holidays. While dieting, hunger between meals can usually be assuaged by one or two glasses of plain or soda water.

Dr. Frank A. Evans, collaborator of Duncan, has advised that the glutton who eats for eating's sake to the point of semi-intoxication should be warned that "since gustatory delights form a great part of his enjoyment of life, to give them up might make life too uninteresting to endure." Newburgh and Johnson have said of the extremely obese that they have a "combination of a weak will and a pleasure-seeking outlook on life." Such are advised to pon-

If you desire long life, do not indulge your appetite to excess.

— *Obesity Constitutes*

N C E at the

or, M.D. ——

It is an established fact that every inch added to the waistline shortens the lifeline.

der well the great sacrifice they must make before embarking on a diet. When so advised some return soon, or sometimes even a year later; some withdraw, never to return. "When thou sittest to eat with a ruler, consider diligently what is before thee: and put a knife to thy throat, if thou be a man given to appetite. Be not desirous of his dainties: for they are deceitful meat." Gland trouble as a cause of obesity is really somewhat of a myth, as fat has only one portal of entry; namely, the throat.

Doctor Evans has summarized the signs, symptoms and results of weight reduction about as follows: If blood pressure is elevated, a certain reduction may be expected. Symptoms of cardiovascular strain, such as breathlessness on mild exertion, will be eliminated. Albuminuria, if present, will be decreased; sugar in the urine may be eliminated. Indigestion, dizziness, headache, sleeplessness and pains in the joints may be relieved. With regard to hernia it may be said that many cases show improvement of symptoms and decreased size of the hernial sac. Without exception varicose veins in the legs of the obese improve with reduction in weight. In other words, subcutaneous fat provides no support for varicose veins. With regard to disturbances of menstruation, accurate dieting will alleviate the symptoms in most patients, and will relieve them completely in some. The correction of menstrual disorders in the obese with dieting suggests that some endocrine troubles may be due to the ingestion of faulty metabolic mixtures at a physiologically impressionable period of the patient's life such as puberty, and not that some metabolic dyscrasia (obesity) is secondary to disturbed endocrine function. The mental attitude is improved. There is more self-confidence. Reducing, or rather restricting the diet, is a good personality exercise.

The greatest menace to those who are overweight is their friends! "Many persons instinctively respond to an obvious loss of weight in another as an evidence of serious disease, and with impulsive solicitude they tell the obese friend after cure that he 'looks terrible' and enquire anxiously about the cause."

Permanence of results? It is admitted that relapses are fairly frequent. A food addiction in some persons is too strong to resist. It is reported of a patient who had reduced from 389 pounds to 169 pounds, a net reduction of 220 pounds, that she reported to a hospital some years later weighing 420 pounds. She now had a serious and painful illness requiring administration of morphine. She was heard to say, "Doctor, can't you put that hypodermic off until after lunch?" Sometimes Doctor Evans impels a hesitant patient toward co-operation by pointing out to the person who weighs, for example, 190 pounds and should weigh 130 pounds, that she is made up of 130 pounds of her charming self and 60 pounds of dead inert fat.

e of the Greatest Perils to Longevity ——

Establishing Normal Vision

MANY people in their eagerness to lead children into the positive path of health and happiness, may sometimes overlook the fact that vision is a part of the general "map" just as much as other bodily and mental functions.

Perhaps sight is the most precious gift of all, since through the sense of sight we gain the greater proportion of our knowledge and experience. Normal vision is the result of a perfect co-ordination of physiological and psychological functions. This co-ordination is achieved by practice from birth. Objects have no meaning to a baby until they become associated with bodily desires and experiences: hunger, sleep, motherly affection, and so on. They come to be remembered and recognized gradually during the first year or so, knowledge and interest stimulating the muscular action of the eyes.

The human eye is relatively large at birth, and continues to grow, reaching its final size in early adulthood, varying with the individual. As we should expect, the eyes of a baby are very elastic and adaptable. The delicate muscles which control the movement of the eyeballs—six muscles to each eye—are growing in size and strength at this age, as also the minute structure of the eyes themselves. The greatest development takes place between the years of six to sixteen with most people, before finally settling down.

During all this period therefore, while the eyes are being used they are growing and making numberless re-adjustments. If we imagine a piece of optical apparatus like a high-precision miniature camera of complex design being used to take photographs and at the same time to be slowly growing in our hands, it will be at once apparent that if we are to produce accurately focused negatives, while the apparatus is changing size, the relative changes which must take place to compensate each other would be beyond all imagination. Yet, in effect, that is roughly what is happening to our eyes, all through the period from birth to adolescence. But in addition we have two sets of apparatus working in conjunction to give us stereoscopic sight—sense of depth —also. The mind has to perceive and interpret what is focused on the retinas.

FRED O. STEAD

It will be instantly realized that this period of life—birth to adolescence—makes terrific demands on sight. Since the invention of printing and artificial light, we have witnessed the rapid growth of educational systems which result in children from the age of five or even sooner, learning to read and write and work out problems of arithmetic. For many hours each day the eyes of children in civilized countries are kept focused on letters, numerals, and diagrams at distances as near as a few inches, sometimes. In addition, many children start learning music out of school hours; another vocation requiring rather near sight.

Not many schools can afford to have desks of the right height for all their children. Those who work for health and happiness among children would do well to consider just how much international, financial, and economic problems frustrate their efforts. The power of accommodation—focusing at different distances—is therefore sometimes not exercised sufficiently, particularly in weather when outdoor games are impracticable. The eyes there-

fore tend to permanently adjust themselves for seeing close, rather than distant things, the latter being out of focus. (Short sight.)

The methods for the improvement of defective sight may be known to many readers, but for those who have not studied them at all, it might be of value to include a simple explanation of the theories underlying these methods.

The chief point to realize, is that even if glasses have been worn for some time, sight is improved by relaxation of the eye muscles and also the removal of any anxiety, followed by toning up exercises for the eye muscles, and practising remembering —and imagining—shapes, colours, and minute detail.

Many children today wear glasses for only minute defects. As will be realized the sight of children will vary considerably from time to time, even from minute to minute. If then, a slight defect is recorded in the optician's consulting room, in which the patient only stays for about half an hour, it is just possible that the result might be somewhat misleading, and that under more favourable conditions, vision might be almost normal.

Once the glasses are worn regularly, and school work, with its intense use of the eyes for close work continued, it is often found that the wearing of glasses is accompanied by a gradual increase in the defect. Stronger and stronger lenses have to be prescribed from time to time, until by the age of adolescence, unaided sight is so bad that very little can be done without glasses.

Many children if helped to establish good vision early enough *would not have to wear glasses at all.* Prevention is easier than cure, particularly in matters of vision. School-days could be got through and normal, healthy vision established for life, even under the very exacting condition of present-day existence.

FACTS AND FANCIES ABOUT THE HEART

(Continued from p. 13.)

blood vessels found at birth, which are less frequent in occurrence. They are the most complicated kind of heart trouble because of the many different defects and their combinations. Only in recent years have they been adequately studied. But there is still much to learn.

Some defects are serious, especially those associated with a blue colour of skin and mucous membranes; others, the majority, in those who survive the first few days or weeks of life, are compatible with active and long lives, though more than average care should be taken to avoid undue strain and infection even by the least seriously affected. Much recent advance has been made in our knowledge and treatment of congenital heart disease. We know now that virus infections, in particular German measles, in the first, second, or third month of pregnancy may result in deformities of the heart as well as other parts of the body. Also, surgical treatment of defects present at birth has advanced greatly, so that the condition causing a "blue" baby is curable in children and young adults by new surgical techniques, at least in part. Further experimental approaches are being undertaken along these lines.

The second important type of heart disease, in some parts of the world the most common of all, making up about a third of all cases, is rheumatic heart disease. The precise cause of it is still unknown, but there are several important things about it that are now well understood. It starts as an acute inflammatory process involving the heart muscle especially, and usually also the heart lining and valves, and often the outer sac in which the heart lies. It is usually set off by a streptococcus infection (generally of the upper respiratory tract).

It is rare in the real tropics. Frequently seen in certain families because of some inherited susceptibility, it crops out in crowded living areas. It may be immediately serious and indeed even fatal, but usually it allows recovery, with some permanent heart damage, variable in degree. The prospects for recovery depend on the severity and duration (often for many months) of the acute illness, the tendency to recurrence, and the amount of permanent valvular deformity and muscle damage.

Some persons have lived long and fully active lives despite rheumatic heart disease; many have not. Important new advances have taken place in our knowledge and treatment of rheumatic fever and rheumatic heart disease. The vigorous use of penicillin at the onset of acute streptococcus infections, of the throat in particular, may cut them short and protect the individual against their sequel, rheumatic fever. The new treatment with ACTH, a hormone, is very promising in cutting short the rheumatic fever process itself. However, much more study is needed before we can draw final conclusions.

THE COLA POISON CAMPAIGN

(Continued from p. 9.)

"Zeneta, an eminent German physician, called attention to the dangers of caffein, asserting that three grains two or three times a day (two ordinary cups) causes rise of blood-pressure (leading to apoplexy), constriction of the chest, dyspnœa, restlessness. Zeneta has seen death result from five grains two or three times a day. The cause of death was tetanic contraction of the heart.

"Caffeine accumulates in the body like digitalis and some other powerful drugs. Some time is required to eliminate the poison after its use is stopped."

Doctor Shoemaker and other eminent authorities call attention to the danger of using coffee in diseases of the kidneys and in arteriosclerosis. These maladies are becoming very common. They are one of the results of the long continued use of coffee, and when found present indicate that coffee must be discarded entirely and forever. The use of coffee by such persons is simply adding fuel to a consuming flame.

Caffein drunkards are being made by the thousands over the country by the delusive advertisements of the Cola beverages, which lead people to believe that Caffein in the form of Cola is a harmless drink, and cause them to acquire the habit of taking large quantities of caffein daily and soon find themselves suffering from the evil effects described in the preceding paragraphs.

It is the duty of the members of the medical profession who are opposed to poison habits to sound a note of alarm and to warn the public through the daily press and every other possible agency, of the delusive claims and false statements with reference to caffein and caffein-containing beverages which are being made by various companies.

The Deadly Work of Cola and Cigarettes

A correspondent, Mr. J. R. Kelly,

writes us as follows: "I know some young people who are slaves to cigarettes and Cola and say they cannot quit. These young men and girls are fifteen to twenty-one years of age and the above-mentioned dope nuisances are sapping and wrecking their young lives. I think cigarettes are killing more people today than whisky."

There can be no doubt that thousands of young men and women are every year sacrificed to the Moloch of greed which creates and maintains the traffic in cigarettes and Cola. The sale and use of these poisons should be prohibited by law.—*Good Health Magazine.*

BOOK REVIEW

TIPS TO STUDENTS, by P. K. Peterson.—Bennett, Coleman and Company, Limited, The Times of India Offices, Bombay and Calcutta. Revised and enlarged edition, 29 Chapters, 150 pages, Price, Rs. 2-4-0.

The majority of students in schools and colleges today endeavour to absorb information and data for the sole purpose of passing examinations and obtaining degrees with little or no forethought of their future usefulness to their respective communities. In this little book the author presents information that is at once simple, practical and worthwhile and also such as will help the student not only to pass his examinations but enable him to acquire knowledge and understanding that will be lasting and useful.

Most failures in the field of learning are due to wrong methods of study, and so the student is given advice and counsel on how to study and take notes, how to read rapidly and with efficiency, what measures to adopt to obtain maximum concentration of attention in his work, how to improve his memory and imagination and how to reason out all his studies and problems as against mere parrot-like learning by rote which is of such little practical value. Many striking quotations from eminent authorities on the subject are presented to clinch the various points and hints that are suggested throughout this work which is of value not only to the student world but also to those who have graduated from college and have an innate desire to improve their mental faculties.

A Pleasing Voice

One writer has said: "A well modulated voice is perhaps the most potent factor in one's entire personal quality group—the voice is to the total personality what colour is to the flower." One lady often repeated to her growing young daughter: "Ladies should speak softly." The social stature, quality, and upbringing of a lady is revealed wherever she happens to be by the pitch, tone, and modulation of her voice. Ladies, show your colours.

How to Clean Glassware

Place a cloth or rubber mat in the bottom of the dishpan. Fill it with soft, warm soap suds (not too much soap). Wash well and especially rub drinking tumblers around the top rim. If stemmed glasses, be careful not to hold them by the stem when washing or wiping. They should be handled carefully lest they break. Rinse in warm, clear water and place upside down on a towel. Cut or etched glassware should be brushed with a soft brush and soapwater before being rinsed. If glasses are placed inside each other by accident, do not force them apart. Fill the inside glass with cold water and place the outside one in very warm water. They will easily be separated. Never put glasses inside others. Drinking glasses should shine and be sparkling.

She Stopped Smoking

"Every fifteen minutes I reached for a cigarette," my friend told me. She smoked two packets a day, then she began to think of the uselessness of burning money and doing harm to her throat and lungs. So she said, "Whenever I felt like taking a cigarette I said to myself 'How much would I suffer if I waited another fifteen minutes?' I looked at my watch and went about my work until I remembered again and wanted a smoke. I repeated the fifteen minute idea and that is two years ago. I have not smoked since."

Looking Well-Groomed

Geeta, my next-door neighbour, always looks neat and trim and though she is middle-aged she is not "fat." Her saris look beautiful on her. Surprise visitors always find her ready to receive company. The reason: she considers her own family as good as any visitors and she tries her best to look well to them for her own satisfaction. Therefore she always looks well-groomed.

Drinking-Cups for the Little Tots

Inexpensive glass drinking cups when decorated with a pretty picture pasted on the bottom of the cup so that the child can see it when he has drunk his milk or orange juice is a great help when children have to drink much liquid. The picture may be cut out of a magazine and pasted on the bottom of the cup and it may be exchanged often and thus be a variety and a surprise.

Look Young at Fifty

Sometimes we hear a remark like this: "You don't look a day older than when I saw you ten years ago." That is a gracious speech and it makes the one to whom it is addressed feel wonderfully good. Now, if you want to look young, think young thoughts, beautiful thoughts, loving thoughts. Look to your figure and if it is not slim make it so gradually by exercise and diet. Don't wear drab colours in dresses, wear light sunshiny things. As you go *build* happy memories. Do something "nice" every day, some good for someone. Don't live in the past. Overlook the shortcomings of others, laugh at your own mistakes, and take life as it comes, fortune or misfortune, with a smile and a prayer. Say with the sage of old, "Even this shall pass away."

RECIPES

Plenty of raw salads for this month should be garnishing our meals. They will be eaten with relish even if they are mostly the same greens but served in different ways. Endive, watercress, lettuce, celery, and other greens should be washed and cleaned very well and washed and left to stand in chlorinated water before eating, so that any unseen parasites or eggs of parasites may be destroyed.

Serve these greens on a salad plate or in a bowl. Mix them or serve them in separate bowls. Chop them or serve them whole. Marinate them in oil or salad dressing, or let everyone help themselves to dressing served in a separate bowl.

Avocado, radishes, small onions, grated beetroots, and grated carrots are very good additions to raw salads and the colour combinations can be made most pleasing to the eye, thus enhancing a good appetite.

Grapefruit, pineapple, oranges, bananas, grapes, apples, peaches, pears, plums, and dates, may also be combined in different ways with melon and the lowly papaya. For health eat plenty of raw salads.

The Best Fruit Salad

Half a medium-sized papaya with seeds and skin removed; 2 apples, washed with cores removed and then sliced; juice of 2 oranges; ½ cup dates, washed, stoned and cut in halves; 1 teaspoonful sugar or honey.

Cut the papaya in medium squares. Also the apples. Sprinkle the sugar over this fruit after it is lightly mixed. Pour the orange juice over and place in individual serving dishes or in a bowl. Place the halved dates on top for decoration. Serves three or four.

Pineapple Candlesticks

One small, ripe pineapple; ½ dozen good plantains; ½ dozen small cookies; mayonnaise.

Peel the pineapple and cut out all the "eyes." Cut in slices—as many as you want for individual salads. Cut out carefully the centre core from each slice leaving the slice whole. Insert in this hole a peeled plantain so that it will stand upright. Top the plantain with a bit of mayonnaise. Place a round cookie at the side, upright, so that it resembles a handle on a candlestick.

Cabbage Salad

Three cups finely shredded or grated cabbage; 1 capsicum, minced; 1 cucumber, diced or grated; ½ cup celery, chopped fine; 1 medium-sized onion, minced; ½ cup lime juice; 1 teaspoonful salt; ½ cup cream.

Mix all ingredients together in a bowl except the cream. Add the cream just before serving. Serves six.

Moulded Carrot Salad

One cup carrots, raw and grated; 1 cup finely chopped celery; 2 cups diced pineapple; ½ sweet capsicum, chopped fine; 2 tablespoonfuls lime juice; 1 tablespoonful sugar; ½ teaspoonful salt; 1 package lemon jello.

Dissolve the lemon jello in 1⅓ cups boiling water. Add the sugar, salt and lime juice. Add the vegetables and pineapple when quite cool. Pour into a mould or into individual moulds, seeing that it is mixed well before doing so. Let stand in cool place or in refrigerator two or three hours. Unmould on crisp lettuce leaves and serve with mayonnaise.

Rainbow Salad

One cup grated beetroot; 1 cup grated carrots; 1 cup finely chopped celery.

Take each of these and marinate for fifteen minutes in French dressing. Place on crisp lettuce leaves, first a centre of celery and then a ring of beetroot and lastly a ring of carrots. Serves four or five.

French Dressing

Two tablespoonfuls salad oil; 4 tablespoonfuls lime juice; 1 teaspoonful sugar; ½ teaspoonful salt; ½ teaspoonful paprika.

Stir well and it is ready for use.

Mayonnaise

One egg; 1 teaspoonful sugar; ½ teaspoonful salt; ½ teaspoonful paprika; ½ teaspoonful lemon or lime juice; ¾ cup salad oil; 3 tablespoonfuls lime juice.

Break the egg into a bowl and add the sugar, salt, and paprika. Mix well and add the ½ teaspoonful of lemon juice. Beat into this five teaspoonfuls of the salad oil, one at a time, beating after each addition until a stiff cream is formed. A tablespoonful of lime juice may now be added slowly, beating all the time. Proceed adding oil and lime juice alternately, beating after each addition until all is used. The mayonnaise should be stiff like butter when done.

Tomato Surprise Salad

Take one tomato for each person. Remove skin by immersing for ten seconds in boiling water. Cut a small portion from the top of each and scoop out some of the centre. Fill the tomatoes with a mixture of chopped celery, apples, and walnuts mixed with mayonnaise. Place each tomato on a lettuce leaf. Top with mayonnaise and serve.

Lemon Pie Filling

One and a half cups water; ¾ cup sugar; ¼ teaspoonful salt; grated rind of one lime; 3 eggs, separated; 6 tablespoonfuls lime juice; 6 level tablespoonfuls cornflour; 6 level tablespoonfuls sifted icing sugar.

Bring the water and the lemon rind to a boil and pour over the sugar and cornstarch which have been mixed previously. Boil very well until thick, stirring all the time. Beat the egg yolks and the lemon juice together until light and frothy and add gradually to the starch mixture, taking care that the egg does not coagulate. Cook for a few seconds to cook the egg and then mix in two tablespoonfuls butter.

Cool somewhat before pouring into a pie dish lined with a crumb crust or with a baked crust. Cover with meringue made by beating the egg whites with a rotary egg beater and adding the icing sugar a little at a time until the mixture is stiff and capable of holding shape. Place this in the oven until the meringue is lightly browned and serve when cold.

Crumb Pie Crust

One cup crushed sweet biscuits or vanilla wafers; ¼ cup soft butter; 1 tablespoonful milk, or more if needed.

Blend all ingredients together with the fingers and pat mixture into eight-inch pie-dish. Pour lemon filling into it at once and bake fifteen minutes.

Butter Cookies

One cup butter or vegetable fat, or half and half; ¾ cup sugar; 1 egg; 2½ cups sifted self-raising flour; ¼ teaspoonful salt; ½ teaspoonful almond essence.

Cream butter and sugar. Add unbeaten egg and beat well. Add essence. sift the flour and salt into the bowl and mix well. The dough may be pressed through a spritz or rolled out and cut into shapes. Bake in hot oven for ten minutes until a golden brown. Makes three dozen small cookies.

Ginger Cookies

One cup sugar; ½ cup butter; 2 eggs; 1 cup ghur syrup; 1 teaspoonful ground ginger; 1 teaspoonful ground cloves; 3 tablespoonfuls cream; grated rind of 1 orange; 4½ cups self-raising flour or more if needed.

Cream butter and sugar. Add the warm, strained ghur syrup. Add the eggs and beat well. Add the flour, the cloves, ginger and grated orange peel. Mix well and let stand in a cool place overnight. Roll the dough thin and cut with cookie cutters and place on sheets of tin to bake in moderate oven. This makes ten dozen small cookies.

DOCTOR SAYS

1. This question and answer service is free only to regular subscribers.

2. No attempt will be made to treat disease nor to take the place of a regular physician in caring for individual cases.

3. All questions must be addressed to The Doctor Says. Correspondence personally with the doctor is not available through this service.

4. Questions to which personal answers are desired must be accompanied by ADDRESSED AND STAMPED ENVELOPES. Answers cannot be expected under ONE MONTH.

5. Questions sent in on Post Cards will not receive attention.

6. Make questions short and to the point. Type them or write them very clearly.

7. Questions and answers will be published only if they are of such a nature as to be of general interest and without objection, but no names will be published. Address "The Doctor Says," Oriental Watchman and Herald of Health, P. O. Box 35, Poona 1.

?

DISCHARGING EAR: Ques.—"A friend of mine has been suffering from ear trouble for five years. He is slightly deaf in one ear and pus oozes from that ear all the time. An ear specialist advised him to have an operation upon the upper part of the cheek near the ear but he is afraid of this operation. Is there anything that can be done for him apart from surgery?"

Ans.—The medical treatment for a discharging ear is adequate doses of penicillin over a sufficient period. If there is mastoid involvement then surgery is the probable answer.

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PHLEGM IN THROAT; HERNIA: Ques.—"(1) I have phlegm in the region of my throat which even coughing does not remove. I tried a nasal douche with salt water but this does not cure it. I am well in every other way and follow a careful, restricted diet. What is the cure for this? (2) My three-and-a-half year old child has hernia and the part swells when she cries. Is there any cure for her other than by undergoing an operation?"

Ans.—(1) Such a sensation of feeling something in the back of the throat which even a douche does not seem to remove, usually is due to swelling of the post-nasal mucus membrane. Frequently this is due to an allergy. Smoking is another cause. Since in your letter you state that you are opposed to using medicinal measures, the best way of treating this would then be to use alternating hot and cold applications to the face and throat two or three times daily for about ten minutes each time. Instead of a drastically restricted diet I suggest that you make certain of a well-balanced diet. (2) The only rational way of dealing with hernia in a child is by surgical measures.

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REMOVAL OF TATTOO MARKS: Ques.—"Please tell me of any harmless remedy which will remove tattoo marks."

Ans.—The only successful means of removing tattoo figures is by means of skin surgery.

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FLATULENCE; CRAMPS IN THE LEGS: Ques.—"(1) You have advised the use of 'Entozyme' as a remedy for flatulence. I have failed to obtain this commodity so far. If it is not available in India can you suggest a substitute? (2) I suffer also from some cramp in the legs. Not pain, but the leg muscles seem to twitch causing sleeplessness and uneasiness. Please let me have a remedy for this."

Ans.—(1) "Entozyme" is a two-in-one tablet. The first coating dissolves in the stomach releasing enzymes that act in an acid media. The second coating dissolves in the intestines releasing enzymes that act in an alkaline environment. This makes them suited to both stomach and intestinal digestion. They are made by A. H. Robins, Co., Richmond, Virginia, U. S. A. This information may help your chemist to secure them through importers. Failing this you could take the ingredients separately. Pancreatin 300 mg. Pepsin

(Continued on p. 23.)

Our Kiddie's Corner

PATTY AND THE LITTLE WHITE DOOR

MRS. JOHN F. UNDERHILL

EVERY box, every dresser drawer, every chest, trunk, can, or basket—in fact, everything that had a cover or a lid must be opened by Patty, for to satisfy her curiosity, she must see what was inside.

Patty knew what was in each one of mother's sewing machine drawers, her kitchen cabinet drawers, her dresser drawers. She knew what Daddy kept in each one of the desk drawers—all except one, which he always kept locked. Daddy told Patty there were private papers in that drawer. But it bothered Patty to know that there was one drawer that she could not look into. When Patty looked wishfully at that one forbidden drawer, Daddy would say, "Remember, Patty, it is said that 'curiosity once killed a cat.'"

The neighbours did not like Patty. They said she was snoopy. For whenever Patty played with the neighbours' children, she always managed to find a chance to look into dresser drawers, medicine cabinets, and clothes closets.

There was a little black chest away up on the top of the bookcase in one neighbour's home. Patty did not know what was in that chest, for it was too high for her to reach even by climbing on to a chair. One day she had a chance to look. The mother was canning and needed some sugar right away. Would Patty rock the baby while she ran to the shop? Patty rocked the baby until the mother was out of sight, then she laid the baby on the bed. Pushing a chair before the bookcase, Patty took two big books from the lower shelf, to stand on. At least she *thought* they were books, but when she stood on them, something cracked inside.

The little black chest was locked, and Patty did not know where the neighbour kept the key. So she climbed down, put the books back on the lower shelf, and pushed the chair back in the corner. The baby was crying, so Patty took him again and rocked him.

A few days later the neighbour was asking if anyone could tell how those two albums of gramophone records were broken. Of course Patty knew, but she did not confess her wrong.

One day Patty went with Daddy to visit Aunt Ellen and Cousin Marjorie, who lived in a district where there had been a recent flood. Patty did not look into the drawers at Aunt Ellen's house; she did not dare because Daddy and Aunt Ellen were sitting where they could see her. So she sat on the settee beside Marjorie and pretended to be interested in the paper dolls and picture books.

Then Daddy said to Aunt Ellen, "I would like to see that flood area. The girls seem interested in the paper dolls; they won't mind staying alone for a while, will you girls?"

"Not at all," said Patty.

"I have seen it," said Marjorie.

As soon as Daddy and Aunt Ellen were out of sight, Patty suggested, "Let's play hide and seek."

"Okay," said Marjorie, putting her paper dolls away. "You may hide first, because you are company."

"You hide your face in the pillow until I call 'Ready,' then you come and find me," said Patty.

Down on the pillow went Marjorie's head.

Patty tiptoed out to the kitchen. First she looked in the dish-towel drawer, then the silverware drawer, then she opened the oven door. Not seeing anything of special interest she looked in the pantry.

"Not ready yet," she called, hoping that Marjorie was still face down on the pillow.

There was a little white door by the cookstove that had a hook on it. Patty must see what was behind that little white door. She lifted the hook and pushed, but the door did not open. She pushed still harder, but the door was stuck fast. Patty was more determined than ever to see what was behind that little white door. She pushed with her knee—it seemed to give a little. Then she threw her whole weight against it. It opened with a jerk, taking Patty with it. Down she fell, splash, into some water! Coughing and choking, she managed to stand up, and found herself in the basement, in water up to her waist. It was cold water, too! Her hair, dress, and shoes were full of water.

Marjorie came out as soon as she heard the noise.

"Oh, Patty," she said, "I am so sorry. I forgot to tell you we could not hide in the basement because of the water down there. The door has been closed since the flood; we are

waiting our turn to have the city pump. I am sorry I forgot to tell you Patty."

Patty did not tell Marjorie that she was *not* particularly looking for a place to hide when she opened that little white door. Patty would have been ashamed to tell her that it was mere curiosity. She took off her clothes and shoes and sat shivering in a blanket until Daddy and Aunt Ellen came.

"It was all my fault," explained Marjorie. "I forgot to tell Patty about the water in the basement. She did not know we could not hide down there."

Daddy looked at Patty. She knew what he was thinking. She hoped that he would not say what he usually said, "Curiosity once killed a cat!" She did not want Marjorie and Aunt Ellen to know the real reason she had for opening that little white door, but she did determine that hereafter she was not going to let her curiosity get away with her.

DOCTOR SAYS

(Continued from p. 21.)

250 mg. Bile salts 150 mg. The bile salts should be coated to be released after entering the intestines. (2) Cramps in the legs may indicate that you are not receiving sufficient calcium in your food, or a failure of your body to assimilate calcium.

?

TUBERCULOSIS OF THE KIDNEY: Ques.—"How can T. B. of the kidney be cured?"

Ans.—The only advance in treating tubercular infection of the kidney in addition to absolute rest is by the use of streptomycin over a prolonged period. There is no short treatment, only rest, time, and perseverance can succeed.

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DEVELOPMENT OF THE BUST: Ques.—"How may the bust be developed?"

Ans.—There have been some seemingly good results by the careful medical use of Cortolex and Stilbesterol. However, this must be done under medical supervision.

?

PILES; OILY FACE: Ques.—"(1) My son aged twenty-five years is suffering from piles. Someone said that as the patient is unmarried he should not be operated upon yet. Is this correct? (2) How can one cure an excessively oily complexion?"

Ans.—(1) Piles needing surgical intervention can be operated upon whenever there is need for surgery. Being unmarried has no relation to the operation. In fact, if his piles are very troublesome he will be in a much better condition for marriage after the piles have been cured. Make certain of selecting an experienced surgeon who knows this work thoroughly. (2) Scrubbing the skin with soap and then applying a lotion consisting of equal parts of Ethyl alcohol and witch hazel is an effective treatment.

?

ASTHMA AND TUBERCULOSIS: Ques.—"A patient of mine has asthmatic attacks every morning upon rising and if he eats food containing much fat or cooked in fat he has heavy attacks, and also experiences a feeling of much flatulence and rigidity in his abdomen. His sputum has been tested with positive T. B. results but chest and sinus X-rays have been taken and everything

is found to be normal. Please help to diagnose this case."

Ans.—If this patient has a positive T. B. sputum, then he has a tubercular infection somewhere along the respiratory passages. The throat irritation may indicate laryngial involvement as the focal site. The asthma might then be due to sensitization to the T. B. toxins or to the T. B. organisms themselves. The remedy then is to cure the tubercular infection. The rigidity after eating foods cooked in fats is due to indigestion and flatulence. Such a person should avoid foods that are prepared in this manner.

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INFANTILE CIRRHOSIS: Ques.—"My child died on the eighth day due to infantile cirrhosis. How could this disease develop so early? What precautions should be taken to prevent any future child from suffering this way?"

Ans.—Infantile cirrhosis is believed to be due to vitamin and protein deficiencies in the mother. Especially the vitamin A and B complex. Cod liver oil and Brewer's yeast tablets given in sufficient quantity to ensure meeting tissue and pregnancy requirements is advised. In addition, one should provide sufficient daily use of milk, fresh butter and milk curds for the complete protein elements and vitamin A requirements.

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HEART MISSING BEAT; PERSPIRING HANDS: Ques.—"(1) Sometimes late at night I feel my heart miss a beat and it gives me a terrible shock. This trouble only lasts a few seconds and occurs only at night when I am in bed. What is your advice? (2) The palms of my hands and soles of my feet always perspire when other parts of the body do not. I hate to shake hands with people because my hands are always wet. Is there any remedy for this?"

Ans.—(1) This condition is called

sinus arrhythmia, and consists of varying forms of irregular pulse beat. The cause frequently is some irritant in the form of tobacco, alcohol, or irritating foods, like curries. Certain medicines may also produce these symptoms. They are not serious—only annoying if one worries over them. If you indulge in any of the above they should be discontinued. Make certain of a natural diet, particularly vitamin E which is abundant in fresh wheat germ. (2) This condition is considered largely due to mental stimuli. The very mental attitude you mention of not liking to shake hands with people illustrates the kind of sub-conscious influence which induces the symptom. Try using on your hands a solution of equal parts of Ethyl alcohol and witch hazel. Also a solution of aluminium chloride and salicylic acid in cologne water is often helpful. Your chemist will have such solutions.

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RUN-DOWN CONDITION: Ques.—"I am losing weight, am anæmic, and suffer from constipation. I am always worried and depressed and have no interest in anything. What can I do to remedy this state of affairs?"

Ans.—Your description suggests a marked vitamin deficiency, especially of the B complex. You could, with real profit take regularly a multi-vitamin preparation, also three Brewer's yeast tablets with each meal. This must be continued regularly to substitute for the deficiency in your diet. Constipation calls for liberal daily use of fresh fruits. In fact your condition might improve considerably if you went on an exclusive milk and fruit diet for one month. Take plenty of both.

?

GAS IN THE STOMACH: Ques.—"Please let us know a cure for gas in the stomach. We both, husband and wife, suffer from this. We are non-drinkers and non-smokers. I was a heavy smoker but upon reading advice given in your journal have given it up altogether."

Ans.—Gas means imperfect digestion. This may be due to several causes such as hasty eating, drinking too much with the meals, or incompatible combinations at one meal. Use of fried, or food cooked in fats or oils, and over-eating, are also cause for indigestion. Good digestion requires vitamin B complex. Make certain these B groups of vitamins are not lost by your method of cooking. I advise you to read and study carefully the little book entitled "Food" by Robert McCarrison and see if your diet needs correction.

?

SALIVA SECRETION: Ques.—"A long-standing trouble of mine is constant salivating and passing of phlegm, so that I have to clear the throat and use a spittoon all the time. I am seventy-eight years of age and am also concerned over the trembling of my hands which I cannot control."

Ans.—Normally one forms from two to three pints of saliva daily. This is automatically swallowed without being noticed. With you there is most likely some interference in the swallowing mechanism as part of your trembling problem, so that the saliva collects in the mouth instead of being swallowed as normally would be done. Other sources of excessive saliva are chronic syphilis, mercury poisoning from the use of calomel for relief of constipation, arsenic and bromides, pyorrhœa and other mouth infections. The cause must be determined to ascertain the best relief measures. The shaking is a condition called Parkinson's syndrome. To avoid excitement is the main requisite. When the spasms are painful the use of anti-spasmodics is helpful. Your doctor will know which type is best for you.

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CHOLESTEROL: Ques.—"In one article in 'HEALTH' you state that foods containing the highest cholesterol content are butter, egg yolks, etc. Then it is also stated that chlorophyll (from green leafy vegetables) together with the natural vitamin A complex contains cholesterol-reducing substances. But in a vitamin chart under Vitamin A are included the above-mentioned butter, egg yolk, etc., which are stated to have the highest cholesterol content. If so, how can they at the same time be cholesterol-reducing? I assume that the vitamin A would contain these ingredients—but possibly I am wrong."

Ans.—Cholesterol is a natural constituent of our food, and like other normal food factors only becomes harmful when not fulfilling its natural function. It is only when one fails to eat normal undenatured foods that trouble follows. In its normal state, and eaten in normal proportions as a well-balanced diet, there is no danger from cholesterol. If the blood vessels become irritated from tobacco, alcohol, or irritating spices, then there is danger of cholesterol deposits. Eating food with all of its normal contents as nature constructs it is the safest course. We need butter unchanged, eggs in limited quantity together with milk, milk curds, whole meal, vegetables, and fruits. Plenty of water to maintain circulation and elimination is also needed. Cholesterol is a lipoid or fat-like substance. Chlorophyll is the green colouring substance in vegetables. These are not the same. Chlorophyll or green vegetables are useful in keeping cholesterol in solution so that it is not so easily deposited in the walls of the blood vessels.

?

KHAN AND WASSERMAN TESTS: Ques.—"Some years ago I had syphilis but after treatment both Kahn and Wasserman tests were negative. I still feel suspicious that I may have some infection left in my body and want to make sure. Which test is most reliable—Khan or Wasserman?"

Ans.—If several tests have all been negative this is good evidence that you have no active syphilis. If you desire still more confirmation, however, you could have a spinal fluid test done. This is the most confirmative test that is done. Both the Khan and Wasserman tests are about of equal value.

What you can do against Appendicitis

Stomach-ache or appendicitis? That is for your doctor to tell! Greatest appendicitis dangers: home remedies, delay!

"Safety First" Rules

Don't take a Laxative

No hot or cold applications

Do go to bed— stay quiet

Call your doctor immediately

Symptoms: Pain in the abdomen, sometimes with nausea, vomiting, slight fever. Follow the above "life-saving" rules.

Modern surgery and new drugs have eliminated most risks of appendectomies. Recovery is surer, quicker, pleasanter!

APPENDICITIS NEEDN'T FRIGHTEN YOU, if recognized in time! Serious consequences from appendicitis can nearly always be avoided by proper, early treatment. However, appendicitis (an inflammation of the appendix, which is a small organ attached to the large intestine) often feels like a simple stomach-ache. Many people ignore it until too late! If the doctor were *always* called *immediately* after this pain starts, the number of deaths from appendicitis could be cut in half!

WARNING! DON'T TREAT YOURSELF! Most common mistake that is made—taking a laxative or enema. This often causes the appendix to "rupture" and spread the infection. A study of appendicitis made in a large city showed that deaths were more than cut in half when laxatives were avoided. So *don't* take home remedies, *don't* apply ice bags or hot water bottles. With any suspicious stomach-ache, be very sure to call your doctor at once! He alone can properly diagnose and correctly treat it.

IF YOUR DOCTOR RECOMMENDS AN OPERATION, follow his advice, and don't worry. Usually the removal of an appendix is a "routine" operation which the surgeon has performed countless times, and which takes only a *few* minutes. And now, new drugs and modern anæsthetics assure safer operations and protection against complications. You can reasonably expect (1) a pleasant convalescence (2) release from the hospital in *less* than a week (3) return to normal health in less than 3 weeks!

SARABHAI CHEMICALS
Baroda

E·R·SQUIBB & SONS
New York

This is one of a series of articles on basic health problems brought to you by Sarabhai and Squibb, showing you how faithful co-operation with your doctor can safeguard your well-being. Sarabhai Chemicals of Baroda now join with Squibb in making available to your doctor medicines of the highest quality, in accordance with Squibb's world-renowned standards.

LOOKING AFTER THE WORKERS' HEALTH IN THE ISLAND OF CYPRUS

Committee meetings, climbing up scaffoldings or crawling der machinery are all in the day's work for Cyprus Labour spectors. Their job is to safeguard the island's factory work and this means not only investigating working conditions in dinary factories, but visiting the smaller cottage type indust as well. Mediating in industrial disputes needs ample patie but in this role Inspector Eliophotou often averts serious stoppa Photo on left shows meeting under his chairmanship in wh building industry employers and trade union leaders discuss t vital problem, the wage packet.

Photo on right shows saw equipment with properly protected guards and fencing which meets with Inspector Eliophotou's approval.

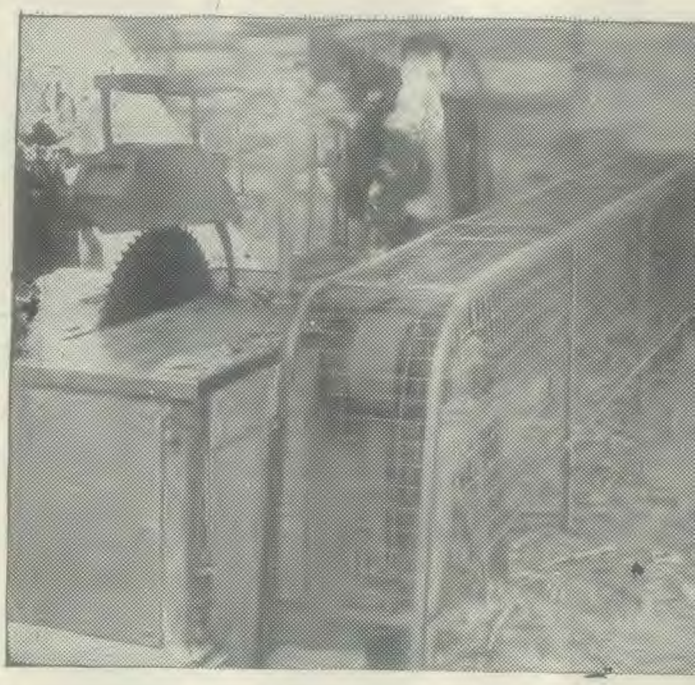

Photo on left: Before he is satisfied this scaffolding on wall of the Nicosia Moat is safe, the Inspector takes a close view the hard way—up the ladder.

Photo on right: Inspector Eliophotou reports details of an accident to the Labour Department Commissioner, a member of the Executive Council.

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THE FAILURE OF SCIENCE

No Salvation Apart From God

FREDERICK LEE

THE twentieth century dawned bright and clear. Pæans to the god of progress arose on every hand. The hearts of men glowed with the shining promise of good things to come. The golden age portrayed by poet and philosopher seemed not far distant. Ministers of the church declaimed on the nearing millennium.

The nineteenth century had been a period of exuberant optimism. Auguste Comte, of France, apostle of science, enthroned the idea of inevitable progress in the minds of men early in the century. Joseph Priestley, English clergyman and chemist, prophesied that man's "end will be glorious and paradisiacal beyond what our imaginations can conceive," all this to be brought about by applied science.

In its first issue of 1950, *Time*, reviewing events of the past fifty years, referred thus to the high hopes of men at the turn of the century:

"On January 1, 1900, the world looked forward to the twentieth century with a degree of confidence unequalled by any previous age and unregained since. Paced fast or slow, progress was sure, limitless, irreversible. Virtue walked with progress; they fed each other."

Henry Steele Commager, professor of history at Columbia University, writing of the optimism of that early day, said, "Not only had the nineteenth century achieved such progress as men could scarcely imagine, it had vindicated the philosophy of progress."—New York *Times Magazine*, Dec. 25, 1949.

The twentieth century had not advanced far before something appeared to be going wrong with human plans and reckoning. The peace that was to be multiplied throughout the earth suddenly disappeared before the terror of the first world war, which left man stunned and bleeding.

Hope, however, still persisted. Now man had learned his lesson, so it was thought. There would be no more war. In downright abandon, such as had not been known in Western civilization before, men and women gave themselves over to corrupting influences. The war was over, so let life be merry! Thus it went until 1929, when the world-wide economic crash brought men to their senses and made them realize that all was not right with the world. From then on the world plunged deeper and deeper into depression, doubt, and fear, until the second world war brought man almost to utter despair.

The journey from exuberant optimism to unreasoning pessimism took but a few short years and changed the whole picture of man's estimate of life on this earth.

Thus *Time* (January 2, 1950), continuing its rehearsal of the events of the past fifty years, described the change that came over the world:

"Starting with superb confidence, the twentieth century plunged vigorously forward from ambush to ambush. Other ages may have suffered greater agonies; none suffered greater surprises. Much that seemed for the best turned out for the worst. . . .

"Shock after shock threw civilization into confusion. As the twentieth century plunged on, long-familiar bearings were lost in the mists of change."

The New York *Times* (December 25, 1949) also described this change:

"Gradually, a haze drew over the bright Victorian skies. One by one the buoyant hopes of the Victorians were doomed to disappointment. Within less than half a century prosperity gave way to ruin, universal peace to universal war, certainty to fear, security to insecurity, the ideal of progress to the doubt of survival. Never before in history had such bright hopes been so ruthlessly shattered; never had the philosophical temper undergone so profound a change."

An editorial in *The Saturday Review of Literature* of January 7, 1950, reflected the startling change that has taken place in man's outlook during recent years:

"Time has written a period in human annals but no new certainty in human affairs. The decade ushered in by war has passed, but the dilemmas, indirections, and complexities of the era still confound the present and confuse the future. Fear rides in men's hearts, and where fear exists creative imagination is atrophied. . . . Ever since the outcropping of totalitarianism we have lived on the edge of disaster. . . . There still lurks behind all thought for the future the uneasy suspicion that time may be running out and that man's fate hangs in precarious balance."

Badly shaken by two world wars, man's modern Tower of Babel began to totter. Obviously, man was no infallible builder. Progress was not inevitable. Science, though acquiring almost god-like powers in a few short years, had no saviour for a day like this.

By the end of the war scientists and statesmen were not too certain that science was an unalloyed blessing. They began to sense the need of some saving grace such as religion might give. Everywhere we began to hear men talking of the need of a return to religion, of a consideration of God's plan for mankind. Men began to see that the world could not get along without God, for science alone might bring about its destruction.

Many thinking men began writing along this line. Raymond B. Fosdick, president of the Rockefeller Foundation, declared:

"The desperate crisis which we face today in human affairs is due to the disproportion between our development of science and engineering on the one hand, and our knowledge of human behaviour and social relations on the other. Perhaps a simpler phrasing of the dilemma would be that the physical power at our disposal has forged far ahead of our capacity to make wise use of it.... For the first time in his history, man's curiosity and ingenuity have led him to sources of physical power by which, unless ethical and social restraints can be discovered, he will blow himself and his institutions into final dust."—New York *Times*, Dec. 19, 1948.

Now we are hearing much talk of a terrible crisis in Western civilization. We are being told by scientists themselves that unless some saving device can be immediately found, the world is doomed. Many who once scorned the very thought, are writing of the end of the world.

What is the true meaning of this unhappy change that has come over the life of man? What lessons does this half-century teach us?

First, it tells us in startling tones that man cannot stand alone, and that science has no saving power. Without God, man is hopeless.

Again we learn that progress is not inevitable. The opposite is true. Even without the added testimony of God's Word, recent events, recorded in letters of blood, declare that the evil in man outweighs the good, and that humanity is lost unless a Saviour comes to redeem him.

The Bible plainly declares, "There is none righteous, no, not one." Romans 3:10. "All have sinned, and come short of the glory of God." Verse 23. "The wages of sin is death." Romans 6:23.

Isaiah the prophet exclaimed, "But the wicked are like the troubled sea, when it cannot rest, whose waters cast up mire and dirt. There is no peace, saith my God, to the wicked." Isaiah 57:20, 21.

The Bible pictures a world brought forth from the hand of God in a perfect state, and tells how it fell from that high plane into a pit of iniquity. The plight of man was to grow worse and worse until the need of redemption was fully evident and man would be led to cry out in his lost condition, "Lord, save me."

If this is not true, then why was it necessary for God to send His only-begotten Son to live with man and to die an ignominious death in order to redeem the world? If evolution be true, then man needs no saviour. That is exactly what the learned men of the eighteenth and nineteenth centuries taught. As far as they were concerned, Christ was crucified for nought. But now their whole scheme of things has fallen like a house of cards. Utopia does not appear so certain as it once did.

In a world that is tottering to its ruin, our only safety is in Christ Jesus, our Saviour.

Concerning this world immediately after creation, the Scripture tells us, "God saw everything that He had made, and, behold, it was very good." Genesis 1:31. Later, the wise man said, "God hath made man upright; but they have sought out many inventions." Ecclesiastes 7:29.

At the time of the Flood, the record states, "God saw that the wickedness of man was great in the earth, and that every imagination of the thoughts of his heart was only evil continually." Genesis 6:5.

Concerning the last days, Jesus declared, "As the days of Noah were, so shall also the coming of the Son of man be." Matthew 24:37. Through the apostle Paul, God prophesied that in the last days perilous times would come. Men would be lovers of their own selves rather than lovers of God. And of this time he said:

"But evil men and seducers shall wax worse and worse, deceiving, and being deceived." 2 Timothy 3:13.

Jeremiah pictures the frustration and disillusionment of our times in these words:

"We looked for peace, but no good came; and for a time of health, and behold trouble!" Jeremiah 8:15.

The prophet accurately describes the feeling of many today in these graphic words:

"My bowels, my bowels! I am pained at my very heart; my heart maketh a noise in me; I cannot hold my peace, because thou hast heard, O my soul, the sound of the trumpet, the alarm of war. Destruction upon destruction is cried; for the whole land is spoiled: suddenly are my tents spoiled, and my curtains in a moment. How long shall I see the standard, and hear the sound of the trumpet?" Jeremiah 4:19-21.

This is clear. Man's plight is desperate, and he can only be saved through an intervention of God Himself. The Lord Himself must bring an end to human history as we know it and begin all over again with a redeemed race of men who are wholly and gladly subject to His will. Not until then will lasting peace appear. There is no truth in the preaching that man, through the arm of science, can work out his own redemption. The evidences of this have greatly increased in recent years.

But there is hope, and that hope is in God. The present lesson for us is that we must look to God and to Him alone. The true Christian, the student of prophecy, has not been disillusioned by what has happened. He has seen all this coming and has preached about it for many years. He knows that these things are but a token of that day concerning which Christ said, "When ye see these things come to pass, know ye that the kingdom of God is nigh at hand." Luke 21:31.

POWER OF THE BIBLE

How the Book of Books Can Help You Solve Your Problems and Overcome Temptation

WILLIAM G. WIRTH

AS EVIDENCE that God loves us, and has confidence in us, we have the gift of His Son, who died that we might be saved from sin. That same divine love that was concerned to save us from sin through the sacrifice of Christ is also concerned to keep us from sin through the ministry of His Word, the Holy Scriptures.

The Bible does this, first, by giving us a clean, pure heart, a heart that is set right toward God. We read in Psalm 119:9: "Wherewithal shall a young man cleanse his way? by taking heed thereto according to Thy Word." By inheritance we have been born with a tendency to sin. David sensed this when he prayed, "Behold, I was shapen in iniquity; and in sin did my mother conceive me." Psalm 51:5. But he knew that there was help for him, that it was possible for his heart to be cleansed from evil; for he appealed to God a little farther on in this same psalm in these words, "Create in me a clean heart, O God; and renew a right spirit within me." Verse 10.

It is one of the glories of the Book that it can cleanse our hearts from bad motives and put within us righteous springs of conduct. It is imperative that our motives be right if we would be right in our living. This lesson Jesus emphasized clearly in Matthew 15:18-20: "But those things which proceed out of the mouth come forth from the heart; and they defile the man. For out of the heart proceed evil thoughts, murders, adulteries, fornications, thefts, false witness, blasphemies: these are the things which defile a man: but to eat with unwashen hands defileth not a man."

In all the history of Christianity those who have championed the cause of right, who have resisted wrong, as did Martin Luther, were stirred to action by the cleansing power of the Word in their lives. Let the seed of Scripture grow in the inner man, and it cannot fail to change his conduct. "So clear away all the foul rank growth of malice, and make a soil of humble modesty for the Word which roots itself inwardly with power to save your souls. Act on the Word, instead of merely listening to it and deluding yourselves." James 1:21, 22, Moffatt. Peter confirms this when he writes: "Being born again, not of corruptible seed, but of incorruptible, by the Word of God, which liveth and abideth forever." 1 Peter 1:23.

Not only will the Bible give us a clean heart to do God's will by clearing away inherited sin; it gives us spiritual power to resist sin. "Thy Word have I hid in mine heart, that I might not sin against Thee." Psalm 119:11.

Ask any doctor for the best way to resist taking a cold, to keep from contracting illness, and he will tell you to see to it that you keep strong your physical reserve force through proper and sufficient food, enough sleep and rest, and exercise. Do this, and you will have the best possible defence against physical ills. Likewise there is no better means of resisting sin than in keeping our hearts in good spiritual condition by frequent reading of the Bible and by prayer. This is what the psalmist had in mind when he said, "The law of his God is in his heart; none of his steps shall slide." Psalm 37:31.

Christ exemplified this for us when, after every one of the three temptations the devil presented to Him in the wilderness, He met the satanic challenge with "It is written." (See Matthew 4:4, 7, 10.) If our Lord employed this method of countering evil, could there be any better way for us to rout the enemy of our souls? The great evangelist Dwight L. Moody well knew the value of the Scriptures as the reserve force against iniquity, for he declared that a man cannot backslide more than twenty-four hours if he reads his Bible every day. The apostle John had full knowledge of this fundamental truth in Christian living when he penned the words, "I have written unto you, young men, because ye are strong, and the Word of God abideth in you, and ye have overcome the wicked one." 1 John 2:14.

Living is made exceedingly difficult these days by reason of the overwhelming problems that crowd in upon us—personal, domestic, business, professional, and social. Surely, if we ever needed reserve power of soul to meet and solve them, it is now. Books based on psychiatry may help us to some extent, but only the Bible, with its potent problem-solving ability, can really supply our need. "For the Word of God is quick, and powerful, and sharper than any two-edged sword, piercing even to the dividing asunder of soul and spirit, and of the joints and marrow, and is a discerner of the thoughts and intents of the heart." Hebrews 4:12.

The Bible gives us sound principles to govern our actions, as we discover in the Ten Commandments, in the Sermon on the Mount, and in the teachings of prophets and apostles. More than that, it affords case studies of men and women with human weaknesses like our own. It shows how David met and conquered the problem of carnality; Moses, the ambitions of this world; Jacob, self-acquisitiveness; Peter, his impulsiveness; and Paul, his religious hatred.

One of our most pressing problems today is how to maintain sound physical and mental health. Here, remarkably enough, the Bible is com-

ing into its own. More and more, as medical science is showing the inseparable connection between mind and body, it is being impressed upon us that health of soul means health of muscle and nerve. Increasingly physicians are recommending the promises and assurances of the Scriptures for sure therapeutic value. We discern more clearly now the truthfulness of the words, "He sent His word, and healed them, and delivered them from their destructions." Psalm 107:20. Also, we are learning the scientific accuracy of the admonition, "My son, forget not My law; but let thine heart keep My commandments: for length of days, and long life, and peace, shall they add to thee." Proverbs 3:1, 2.

Thus the Bible can give you strength for today. Shall we not make this Book our guide and counsellor, not merely respecting it, but assimilating it, realizing that "man shall not live by bread alone, but by every word that proceedeth out of the mouth of God"? Matthew 4:4.

THE LOVE OF GOD

D. C. CLAESSEN

ALL LIFE revolves around "Love." It is, in fact, the pivot on which the whole universe spins. All creation sprang from the great love that was in the heart of God. There was the urge to create from the desire to share life with others.

As we look upon the marvellous co-ordination and adaptation of life on the earth we know that God is the Source of all wisdom and power. The mind of God only could conceive the beauty and orderliness of this world, to say nothing of the rest of the universe, of which we know but little.

Nature proclaims on every hand that a master-mind has planned every detail of life. There is far too perfect a balance in nature for it to be the outcome of accident or chance. Evidence points definitely to a well-conceived plan carefully executed in which the component parts dove-tail into a most pleasing and harmonious pattern of life.

Man's Position in the Scheme of Things

Of all the creatures on the face of the earth man only is able to estimate and appreciate the meaning of what he sees about him. He only can reason and prove from things seen, the existence of God, to whom he feels a sense of personal obligation; and as he weighs the facts carefully in his mind he is overwhelmed by the thought that everything in nature seems to have been planned with him in mind and for him. Flowers give him pleasure. No animals lower than man have any idea of the infinite varieties of flowers, nor do they seem in any sense to be emotionally stirred by them. In fact, they are perfectly indifferent to their very existence.

Gorgeous sunsets drive man into ecstacies of feeling, but they leave animals unmoved, or at least unconcerned. A thousand and one beautiful aspects of nature appeal only to man, whose æsthetic sense is a gift from God and which by God's help he can develop to a high degree.

Man Created in God's Image

God in the beginning said, "Let us make man in our own image." He also said, "He shall have dominion over the animals." This at once explains the wide gulf that exists between man and the lower orders of life. Man's superior intelligence and his mastery over the animals confirms the Bible story of his origin.

Man was created perfect and the earth as it came forth from the hand of God was without blemish. Death and decay resulted from sin—from a transgression of the law of the spirit of love. The moral law which was implanted in the heart of that first pair in Eden was based on the great principle of love. That law was to govern man's relationship to God and all his human associations. It is a perfect law and has come down through the centuries unchanged.

Man with all his ingenuity has not been able to think out a single moral principle which is not already embodied in the Ten Commandments.

Through disobedience man incurred God's displeasure and brought on his head the consequences of sin. "The wages of sin is death." This sentence faced him, and if the great love of God had not been exercised on his behalf he would have been eternally lost.

Sin brought decay. The earth was cursed and brought forth thorn and thistle. To man the pronouncement was, "By the sweat of thy face shalt thou eat bread." To Eve, "In sorrow thou shalt bring forth children."

There was, however, hope for fallen humanity. God's great plan of redemption was wide enough and perfect enough to include within it, not only our first parents, but all the countless millions of their progeny to the end of time.

There must be a restoration of the image of God lost through sin, and that was made possible through Jesus Christ who is the express image of God. "Beholding Him [Jesus] we are changed."

If we keep Christ always before us as our Example and walk in His footsteps we shall become transformed in character and fulfil the Scripture exhortation, "Be ye perfect, even as your Father in heaven is perfect."

The Son of God was sent from heaven to make manifest the Father. Jesus on one occasion said, "He that hath seen Me hath seen the Father." The character of Christ is the character of God. Love, mercy, and compassion, were seen in every act of Jesus.

God gave us His Son. We are reconciled through the blood of Jesus. "God was in Christ, reconciling the world unto Himself." All heaven was emptied in the bestowal of the Son as Redeemer. "God *so loved* the world that He gave His only begotten Son." John 3:16. "Behold, what manner of love the Father hath bestowed upon us." 1 John 3:1. We really cannot comprehend this love. It is beyond the mind of man.

Through faith we can appropriate to ourselves this love of the Father and become sons and daughters of God. The exercise of faith is all that is required of us. "Believe in the Son of God and ye shall have everlasting life."

If ever we are in danger of losing our concept of the love of God, let us turn to the open book of nature, and look up into the heavens and we shall see there unmistakable evidences of the wisdom and power and love of the Creator which have come from His hands.