



MAY 1944 REAL VEAR OF PUBLICATION IN THIS ISSUE . . The Wonder-Worker * The Morale Vitamin * nly One Way to Get Thin

* Only One Way to Get Thin * Rickets and Scurvy in India * Tooth Truth * Keeping Fit After Sixty * Safe Sedatives? * The Doctor Says

P. K. Patel

The Age of Innocence.



W. N. H. S.

Professor Alexander Fleming, discoverer of penicillin, examining week-old cultures of penicillin notatum in his laboratory at St. Mary's Hospital, London.

NEDICAL history is full of wonders, but every now and then something outstanding makes its appearance. The development of the new drug, penicillin, is the latest sensation. A year ago it was known only to a very few scientists. Today scientists are convinced that penicillin may be considered one of the most potent weapons ever discovered in fighting a number of diseases. Especially is this true in combating the staphylococci, the bacteria which are the wound infectors, the chief destroyers of human life in peace as well as in war.

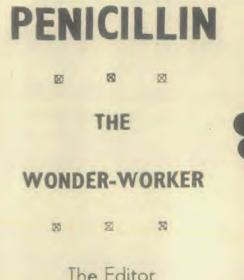
This new wonder-working germkiller is obtained from cheese mould. It was discovered by Prof. Alexander Fleming of the University of London in 1929, who, in his laboratory, was examining a glass culture plate with millions of bacteria. His professional eye detected a halo of green fluid around a fleck of green mould. Something was destroying the bacteria! A mould, which had drifted in through the open window and settled on the bacteriacovered plate, was bringing sudden death to the germs. Thus came penicillin, a drug that may prove to be one of the greatest of all the discoveries of medical science. Mould is a primitive plant or low form of vegetable life. This particular mould, *Penicillium nota*tum, secretes some substance which is the microbe destroyer.

However, Dr. Fleming did very little in the matter for about ten Then came the second vears. Great War. In the meantime, Prof. Howard Florey and others, of Oxford, had made clinical tests of penicillin. They set to work growing the green mould in earthenware flasks. The chemists took the resultant hard, rubbery mat in which was hidden the bacteria-killer, and finally were. rewarded with the minutest supply of yellow-brown powdery stuff. This proved to be the bacteriakiller! It became apparent that as little as one part in 160 million would slow down the growth of bacteria. Here was an amazing drug, hundreds and even thousands of times as potent as the renowned sulfa drugs.

This, of course, was not the end of the story. There was yet much to do. Mice were experimented upon. In twenty-four out of twenty-five cases the results were extraordinarily favourable. In 1941 the experiments were transferred from mice to menmen who were victims of ravaging sickness, to which there was apparently no cure, men at death's door. As far as medical science knew, the cases of these men were absolutely hopeless, but they received the wonderful yellow drug,—dissolved in water,—injected into their blood streams. Nearly all of them are alive today.

It seems as though the staphylococci are to be conquered. There is hope for those suffering from staph septicemia, which used to kill nine out of every ten so stricken, and cause great gaping wounds that go on for years without healing. Penicillin is working wonders, and people who. could not tolerate sulfas are able to take penicillin without any unpleasant reactions.

There seems to be one serious drawback, however, and that is the difficulty to produce penicillin in any quantity. It is not yet available to the general public; in fact, the supply is so small that even the armed services cannot get enough. It would seem as though the conditions have to be exactly right for this beneficent mould to do its work and secrete the magic, life-saving fluid. It has been stated that "supplies were so short that Dr. Florey had to recover penicillin from the urine of patients-the drug is excreted rapidly. In at least one case supplies of the drug ran out in the middle. of a treatment. The patient, who seemed sure to recover, died before more was available." Penicillin does not seem to destroy bacteria directly, but stops their



reproduction. Once this has taken place, the white blood cells themselves have little difficulty in destroying the intruders.

Penicillin is not potent in all cases of disease. It is not of value where bacteria infects the heart. It is not potent against tuberculosis and arthritis, nor will it give relief in such diseases as infantile paralysis or yellow fever. In regard to typhoid, typhus, and syphilis, the drug has not been tried vet. It has worked in a miraculous way in the few cases of pneumonia in which it has been (These had resisted the tried. sulfa drugs.) It looks very promising in regard to meningitis. It is a strong weapon against boils, carbuncles, and some troublesome eye infections, and has given excellent results with respect to infections following burns.

Plans for expanded manufacturing facilities and experiments of new processes hold out hope for an increase in the supply. One hope for increased production is a new and speedier mould process developed by Stanford University's bacteriologist, Charles E. Clifton. If this process is a success, it would result in continuous production.

It is now reported here in India that two young scientists in the Department of Biochemistry in the Institute of Science, Bangalore, have brought penicillin to India, and it has been stated that they have been successful in growing it in large quantities and in a quarter of the time previously taken. Whereas in America and England twelve days are needed for the penicillin mould to grow fully, the Bangalore method is stated to have reduced the period to three days. The culture for this work was first obtained from abroad in 1943, and now the Indian product, when tried in a big military hospital here in India, seems to have yielded very good results in healing infected wounds and war injuries.

In any case, it is already clear that penicillin will some day rank as one of the greatest accomplishments of medical research. One source of information states, "It is now in mass production and will be available in adequate quantities for military and civilian needs within the next six months."

"THIS IS A HARD SAYING; WHO CAN HEAR IT?"

The Editor

THE Italian lad in the picture is offering to carry a part of the load of a British soldier in Italy. He probably does not realize that his ancestors required citizens to carry a soldier's load for one mile.

Like some of the other words of the Lord Jesus, the Jews thought it a "hard saying" when He said, "Whosoever shall compel thee to go a mile, go with him twain." This might sometimes have been inconvenient and often caused resentment. On the other hand, unfortunately, we sometimes find people who resent the idea of granting to others what would seem to be a natural right or liberty.

Liberty is usually defined as "the unrestrained enjoyment of natural rights." Also, "the power of free choice." Again, "freedom of speech or action." In speaking of religious freedom it should be understood as the inherent right of the individual to worship God in any way that his conscience may dictate; always providing, of course, that this is not done to the detriment of the rights of anyone else.

Generally speaking, it is undoubtedly true that mankind has found it even more difficult to concede religious liberty than political or social liberty. Certainly no wars have been more bitter or more inhuman than religious struggles.

Religious zeal, sometimes "not according to knowledge," and quite often totally blind to the



W. N. P. S.

rights of others, still does strange things.

Some months ago the mayor of a town in Texas, U. S. A., whipped a member of a sec! known as Jehovah's Witnesses because the man attempted to teach his religious beliefs in the town. The Jehovah Witnesses are stated to "behave at times in a way unnecessarily aggravating to individuals and public officials. Furthermore, the Witnesses preach a brand of hatred against other religious and racial groups."

Nevertheless, it is quite obvious that the millions of American citizens of the State of Texas do not approve of the mayor's action in taking the law into his own hands, and thereby himself committing a lawless act.

One American editor writes: "Posted on hundreds of thousands of walls in this nation is a war poster. This poster urges us to buy bonds. One line reads, 'Protect Freedom of Religion.' Under this is another line which reads, 'That each shall worship according to the dictates of his own conscience.' That was why the people who first settled this country came here. They came to America because they wanted freedom to worship God as they chose. That has, since that day three centuries ago, been a glorious heritage of this nation. We have had freedom of religion. We cherish it. We protect it. We fight for it. It is listed on this poster as one of the reasons why we are fighting a war —one of the reasons why every one of us should buy bonds in order to help win this war, that that principle of freedom of religion might survive."

Here is something of which we here in India should take note. The principles of religious liberty are little understood in India. The respective spheres of politics and religion, of the things of God and the things of the State, are hopelessly muddled in the ideas of the millions of India, and this to their detriment as a united nation.

Freedom is a fragile and precious thing—we lose it instantly once we deny it to people who disagree sharply with us. Freedom flowers in its most abundant form when we guarantee it to those with whom we disagree most sharply.

The MORALE VITAMIN

THE government in England decided over a year ago that the vitamin known as thiamine should be added to all white flour.

Thiamine, or vitamin B¹, is often popularly known as the "morale vitamin," although it has a number of important functions in human nutrition. Not only is thiamine necessary for a healthy condition of the nervous system, but adequate amounts of it must be included in the well-balanced daily diet to help maintain normal appetite and normal digestion. This vitamin is also required by the body for its proper and most effective use of the energy-giving sugars and starches in foods.

When thiamine is low in the diet, the person deprived of this nutrient invariably becomes irritable, depressed, and fearful. He is restless, but tired and lacking in pep. These unfortunate signs of nervous exhaustion can be promptly relieved by taking thiamine. Favourable effects are noticed even within a few hours, and permanent relief usually can be achieved by this means.

At the Mayo Clinic in the United States, a number of volunteers were put on dicts adequate in every way except in vitamin B¹. Their meals were attractive in taste and appearance, their living guarters were pleasant, and they were furnished recreation and diversions that should have kept them occupied and happy.

J. A. Tobey, M.D., D.Ph.

They were happy and contented when the test began. After a few weeks on this thiamine-deficient diet, however, these subjects became depressed and quarrelsome. As reported by Dr. Russell M. Wilder to the Institute of Food Technologists, it required great tact and diplomacy to make them adhere to the program agreed upon, and strikes were threatened daily. After a few months, open rebellion broke out.

Then thiamine was given, and the mental difficulties disappeared. All was serene again, the subjects resumed their work and became contented. Perhaps this vitamin is the answer to the problem of industrial unrest. Certainly, it is a needed factor in the control of the war jitters.

Lack of thiamine in the diet is not, of course, the only cause of worry and irritability, but it is often an important factor, and it is one that can be easily corrected. Thiamine and other necessary nutrients are not difficult to obtain in our daily fare.

The best and most economical food sources of vitamin B¹ always have been the whole-grain prodnets, such as oatmeal, and wholewheat and rye breads. Some other good sources of thiamine are properly cooked vegetables, nuts, and eggs. Most fruits are relatively poor in this vitamin, although they are valuable in the diet for other reasons. Milk, our best all-round food, has some thiamine but not very much, a pint offering only about half as much as six slices of whole-wheat or enriched bread.

How much thiamine do we need daily? The amount required varies with the age, sex, and physical activity of the individual, and will range from less than one milligramme for young children to a little more than twice as much for a very active man. Since a milligramme is only one thousandth of a gramme, and there are about twenty-eight grammes to an ounce, it may be readily seen how potent are extremely small quantities of this nutritional factor. There is, however, no possible danger of getting too much thiamine from any one lood or combination of foods.

Six one ounce slices of 100 per cent whole-wheat bread will supply from one quarter to one-third of the vitamin B^1 needed daily by the normal consumer. National bread is not 100 per cent wholewheat and so does not have quite as much thiamine.

The balance of the moralebuilding vitamin in your daily fare will be obtained from your quota of milk, eggs, nuts, and vegetables. With these as the foundation of your daily diet, you will obtain plenty of thiamine, as well as all of the other vitamins and minerals needed.

ONLY ONE WAY TO GET THIN

Blake Clark

EVERY day, millions of Americans swallow thyroid pills, drink grape juice and take laxative salts, soak themselves with "magic cremes," sweat in salt baths, and even maul themselves with hard rubber rollers in efforts to reduce waistlines and erase second chins.

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There is sound reason for worrying about overweight. It is a serious hazard to health and to life itself. Among men 20 per cent too heavy, mortality is about one third higher than the average. Fifty per cent overweight brings double mortality.

According to scientific research, the cause of overweight is simple: the only reason people are fat is that they overeat. This was proved by the most carefully controlled experiments ever made in weight reduction. They were conducted by Dr. Louis Harry Newburgh, of the University of Michigan Medical School, who included in his tests overweight persons suffering from every ailment popularly believed to be the cause of obesity.

Doctor Newburgh's patients staved in the University Hospital, where conditions could be kept constant. By tests he established each patient's normal food requirements, then he controlled the amount of food each consumed, weighing every gram. Everything was analyzed—a test slice of bread being taken from the middle of every loaf, a sample of cheese from the centre of each five-pound head, a portion of milk from every hottle.

MAY 1944 ------

The bulky boy won't stand hard ship like the lean lads.

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If Dr. Newburgh's tests showed that a man ordinarily used up 3,500 calories a day, this patient was put on a diet of, say, 800 calories. Hence he was forced to feed on the fuel stored within him.

By seeing to it that each person ate less than he used up, Dr. Newburgh reduced every one regardless of his supposed type of obesity. He even predicted the weight each patient would reach in sixty days, in every case accurately to within one pound.

One mistaken explanation for excess weight is that "it runs in the family." But Dr. Newburgh's work shows that it is ovcreating, not heredity, that is the cause. A study of the food habits of 142 fat boys and girls from two to thirteen vears old showed that all overate, especially of starchy foods. Science admits that bodily shape is inherited. However, a person with a thick-set build is not naturally obese, though he may become so by eating too much.

Miss N is a dramatic refutation of the heredity myth. She had always been a "fatty," weighing 260 at the age of twenty-one. Her father was a six-foot 200-pounder, her mother likewise huge. Everyone pitied the girl for a condition they thought she could not help. A check on her diet revealed that she ate moderately of meat, fish, and eggs, but stuffed herself with cakes, pies, and rich creamy foods. Her doctor brought her weight to normal by placing her in a nursing home, on a non-fatty, vitaminassured diet of 600 to 800 calories.

In some cases glandular disturbances are said to cause obesity. But Dr. Newburgh, without drugs and by diet alone, has reduced persons with glandular disturbances. His most triumphant success, in fact, was with a 500-pound man whose great weight was considered due to gland trouble.

On a 300-calorie diet, he lost 296 pounds in a vear-nearly a pound a day, without drugs or exercises. Thereafter, on a 600calorie diet, he came down to a normal weight of 194.

There is a theory that, regardless of diet, a glandular disturbance causes lowered metabolism, which in turn brings overweight. It is true that if a person's rate of metabolism drops, he will gain weight if he continues the same caloric intake of food. But low metabolism means decreased bodily need. If food intake is reduced, there will be no gain in weight.

Many believe that exercise is the best way to reduce. Actually it is a poor substitute for proper diet. A man weighing 250 pounds must climb twenty flights of stairs to rid himself of the energy from one slice of bread. In walking he may dissipate 100 calories per horizontal mile, but by omitting an ounce of cream from his diet he will reduce the inflow calories to the same extent. He must walk thirty-six miles to rid himself of one pound of fat-and in such a hike he will probably develop a ravenous appetite and eat so heartily as to cancel the effect of the exercise.

Football players do lose four or five pounds during a hard game, but this loss is chiefly from perspiration and will be replaced by a few draughts of water. In steam baths you lose water, not fat. Nor will the massage given in swanky beauty parlours and health gyms take off fat. The only person who loses weight through massage is the masseur.

Why do people overeat? Most animals will stop eating when they have had enough. But man, enjoying the flavour of food, often ignores nature's warning. Increase in weight may also come when the needs of the body decrease with sickness or old age, but appetite remains the same.

Dr. Newburgh believes, however, that there is another, and more frequent, cause of overeating. This is the respite from emotional problems which indulgence in food brings. Of the hundreds of obese persons Dr. Newburgh has treated, a large proportion had some serious emotional disturbance, and not one could be persuaded to keep permanently to normal diet unless this problem was solved.

Dr. Newburgh had one patient whose father forced her to take care of a moronic brother. Her distasteful duties forced her to seek compensation in food, and she weighed twice her normal weight. Under Dr. Newburgh's care, living away from home and freed from responsibility for her brother, she enjoyed life, ate normally, and lost weight. But as soon as she went home, under the stress of her unpleasant routine she reverted to her old eating habits. Twice she returned to the clinic. Unable to solve her emotional problem, the doctor could not keep her at normal weight.

Dr. Newburgh's aid was sought by another young woman who had been driven to the consumption of huge quantities of food to offset the physical and mental cruelty inflicted by a drunken husband.

In the hospital Dr. Newburgh put her on a diet of 450 calories, and in thirty-one days she lost seventeen pounds. She obtained a divorce and a decent job. Her emotional problem solved, she ate properly, came down to her normal weight, and kept it.

Every person has an ideal weight, and can attain it. The following tables of ideal weights were drawn up by Dr. Louis I. Dublin, statistician of the Metropolitan Life Insurance Company, and are more accurate than the usual "average weight" tables because they take into account the size of frame. ("Frame" denotes bony structure; if your bones are small and your bony structure slight, you are of small frame.)

MEN

(as ordinarily dressed) Ideal Weight

	eight i shoe	Small es) Frame	Medium Frame	Large Frame
51	3"	119-128	127-136	133-144
5"	4"	122-132	130-140	137-149
5'	5"	126-136	134-144	141-153
5'	6"	129-139	137-147	146-187
5'	7"	133-143	141-151	149-162
51	8"	138-147	145-156	153-166
52	9"	140-151	149-160	157-170
5^r	10"	144-155	153-164	161-175
5'	11"	148-159	157-168	165-180
6'	0"	152-164	161-173	169-185
6"	1"	157-169	166-178	174-190
6'	2"	163-175	171-184	179-196
6'	3"	108-180	176-189	184-202

WOMEN (as ordinatily dressed)

	idear	weight	
Height (with shoes)	Small	Medium Frame	Large Frame
	W. N. COMMUN.		
5' 0"	105-113	112-120	119-129
5' 1"	107-115	114-122	121-131
5' 1" 5' 2"	110-118	117-125	124-135
5' 3"	113-121	120-128	127-138
5' 4"	116-125	124-132	131-142
5' 5"	119-128	127-135	133-145
5' 6"	123-132	130-140	138-150
5 7"	126-136	134-144	142-154
5' 8"	129-139	137-147	145-158
5' 9"	183-143	141-151	149-162
5' 10"	136-147	145-155	152-166
5' 11"	139-150	148-158	155-169
6' 0"	141-153	151-163	186-174

The portly man of fifty should not look at these tables and say, "I need my extra poundage to go with my extra years," for his ideal weight at fifty is the same as at thirty.

If you are definitely overweight but not excessively so, here is the best way to reduce: Cut down on fats and fat-producing foods. Eat one pat of butter and one slice of bread instead of two. Give up mayonnaise and rich sauces. Switch to boiled or poached eggs and avoid the fat that frying or scrambling adds to them. Drink skimmed instead of whole milk Eat cottage cheese instead of whole cheese. Eat more green foods, which are almost devoid of fat. You can lose some weight by cutting out liquor; an ounce of whisky converts to as much fat as a slice of bread does.

If you are fifty or more pounds overweight, ask a doctor or dietitian to chart for you a 600- or 800-calorie diet containing all the necessary proteins, vitamins, and minerals, which will keep up your strength and reduce you three to five pounds a week. Don't be discouraged if you fail to lose weight the first week. Water accumulates in the body during the first few days of dieting and often causes a small rise in weight.

Dr. Newburgh disapproves of "wonder" diets which guarantee to remove nine pounds in nine days, or which advise people to eat carbohydrates at one meal, proteins at another, and live like a king.

The simple truth is that anyone can reduce by cutting his intake of calories below his daily expenditure of calories, taking care to include in his diet a full supply of minerals, vitamins, and proteins.

RICKETS and SCURVY IN INDIA SAVE THE CHILDREN

Dr. H. C. Menkel

THE conditions of malnutrition called rickets and scurvy are very prevalent in India because of defective nutrition. The foods needed by childhood for healthy, balanced development are not provided. This may be due to poverty or to ignorance regarding the kind of food needed to provide the materials necessary for growth of body and mind.

The symptoms indicating this form of defective feeding are crooked spine and legs, the socalled pigeon-shape breast, round shoulders, underweight, retarded growth, pale skins, white fingernails, swelling of joints with pain, bleeding gums, and tooth decay. There may be bad breath and reddish patches on the skin, and sometimes skin and mouth ulcers.

One frequently sees such children. The reason is that they have not received in their daily food such articles as milk, fresh butter, fresh, green leafy vegetables, and properly matured potatoes. Such fruits as oranges and lemons are particularly valuable sources of the needed food elements.

One of our major considerations in India should be how to bring about such changes so as to make available to all Indian children the actual essentials for developing a sound mind in a sound body. "Save our children from rickets and scurvy" should be among the post-war slogans.

DIET in EPILEPSY

Dr. H. C. Menkel

FPILEPSY is a convulsive, chronic condition due to some inherited constitutional defect. It is one of the oldest diseases in medical literature, but as yet the actual cause for the convulsions is unknown. No constant physical defect has been associated with the condition, as physical examination usually reveals no characteristic abnormality.

While there is no specific drug for this condition, there is a diet plan which, particularly in children, proves effective for keeping the convulsions under control. This is known as the ketogenic or high fat diet.

Like diabetes, the treatment of epilepsy depends more on what the epileptic person eats than on almost anything else. The following dietary plan of treating epileptic children is in operation at the Milwaukee Children's Hospital in America.

The diet treatment provides for a preparatory period, a control period, and then the maintenance diet.

First, there is a ten-day fast, during which orange juice, a broth without food value, and bran wafers are given. About 200 cc. of orange juice and 800 cc. liquid, as water and broths, are allowed daily.

After this fast period the patient is given a diet containing 15 gm. carbohydrate, 1 gm. protein per kilogram of body weight, and the remaining caloric requirement for age and size, in the form of fat. This may be approximately 15 calories per pound of body weight, but need not exceed 2,000 calories for the average individual.

In the more resistant cases, in which convulsions are not controlled, the fat intake must be increased by 5 gm. to the daily allowance every week to the limit of tolerance, if necessary.

When the convulsions have been brought under control by this



K. Muthuramalingam

diet, the same is maintained for about three months. Then 10 gm. protein may be added to the daily food allowance. If on this increase there is no return of convulsions after one month, then 10 gm. carbohydrate may be added daily. This plan of alternately increasing protein and carbohydrate is made monthly until the protein reaches 2 gm. per kilogram of body weight. After six months the daily fat allowance may be reduced 10 gm. per month. This diet should be given in three well spaced meals per day.

The following special note of advise is given: A gram scale is absolutely necessary.

Add to the diet nothing containing available carbohydrate, protein or fat, which is not included in the calculated diet.

Include one egg daily (protein). Use 300 gm. cream daily to ensure a supply of calcium and phosphorus.

Use some raw, fresh fruit and one cooked and one fresh vegetable daily to protect against mineral and vitamin deficiencies.

Bran wafers and diabetic bran breakfast foods may be used ad *lib*.

Broth may also be added, but must be deducted from fluid allowance.

TOOTH TRUTH

W. W. Bauer, M.D.

F ALL the health advice which has been offered to people, none has been more confusing than the advice about how to keep our first and second teeth and thus avoid investing in the third. We have been told to visit the dentist twice a day and use the right kind of dentifrice twice a year—or something! To say nothing of eating vegetables, drinking milk, avoiding candy and sweets, and otherwise conducting ourselves in a highly estimable and extremely boring fashion.

How many trusting readers, tumbling into bed too sleepy and tired to clean their teeth, have suffered pangs of conscience which soon brought them out from under the warm covers and into the cold bathroom to perform the necessary scrubbing? Who has not eaten her sweets with inward resolve that upon the next temptation she would be strong? Honestly, now, have you never come away from a session with the dentist vowing that never again would you forget any of the things you must do in order to have strong, clean, beautiful teeth which will last forever and never hurt?

For the dentally unregenerate there is comfort in a recent booklet by Dr. Vern D. Irwin and Netta W. Wilson, Division of Dental Health, Minnesota Department of Health. Doctor Irwin and Mrs. Wilson, under the title, "An Evaluation of Dental Health Literature," have blithely massacred the health educators who have been telling you and me what to do about our teeth.

Their study was based upon 274 pamphlets, leaflets, books, and articles in periodicals, published by State and provincial health departments in the United States and Canada, by the American Dental Association, the United States Children's Bureau, and the United States Public Health Service.



Out of these publications they have gathered a large number of statements relating to health of the teeth and how to preserve it. From literature published before July 1, 1940, 235 typical statements on important phases of dental hygienic practices were analyzed, of which 74 were classed as facts, 54 as fallacies, and 104 as controversial. Only about 1 out of 3 qualified as a fact. From another group of publications, appearing since July 1, 1940, 145 similar statements were analyzed, of which 67 qualified as facts, only 8 were downright fallacies, and 70 were controversial. Advice now available about teeth seems definitely improving, but even so a little less than half the statements which would come to the attention of the average reader were held by these students to be facts about which there is essential agreement among responsible members of the dental profession.

The bibliography of the book includes 76 State and provincial health department bulletins, 24 pamphlets by the American Dental Association, 5 bulletins from miscellaneous sources, 6 periodicals read by adults, and 12 textbooks written for use in schools. The study represents an indictment of what the American people have been told about teeth, not by commercial promoters, but in the serious and often solemn literature produced by persons whose sincere desire is to teach about dental health and how to preserve it.

Some of the fallacies to which Doctor Irwin and Mrs. Wilson address themselves are commonly held by persons other than physicians and dentists. So much emphasis has been placed upon the claim that modern man's jaw has deteriorated because he does not chew tough, hard foods any more that everyone accepts it as a fact. Doctor Irwin and Mrs. Wilson say that the situation is quite the reverse: man's jaw has deteriorated and therefore he can no longer chew tough, hard foods. Teeth are commonly referred to as a form of bone. This is inaccurate since none of the tissues of which teeth are composed are bone. The crown of the tooth has been described as hard, dead matter. It is hard enough but not dead unless the pulp is devitalized.

Losing baby teeth early or keeping them too long has been said to result invariably in poor development of the jaws and crooked, unsightly permanent teeth. This is a commonly accepted belief, but the fact is that premature loss of the first "baby" molar seldom results in crowding of the permanent teeth.

Do you believe that tooth decay indicates dietary deficiency? Doctor Irwin and Mrs. Wilson say this has not been proved, nor do they agree that increased dental decay is necessarily to be expected during pregnancy. They also deny that illness breaking down bodily health is certain to injure the teeth. They point out that many severe systemic diseases occur without tooth deterioration.

One of the most widely accepted statements and one which has been encouraged through commercial advertising is that the soft food characteristic of man's civilized diet is largely responsible for tooth decay. Doctor Irwin and Mrs. Wilson dispose of this belief in two words, "Not proved."

Are you convinced that when a toothache occurs it is too late to preserve the tooth? This is not always so. Do you still believe that a clean tooth never decays? Again, not true.

As far as children's teeth are concerned, the authors say that evidence in support of the benefits of cod-liver oil, orange juice, and tomato juice is controversial. Neither do they admit that school children whose teeth are in good condition necessarily suffer fewer failures in their scholastic work or fewer epidemic diseases. They do not believe that breast feeding is a guarantee for good teeth. They regard as unsafe the advice given to parents that deformities caused by thumb sucking tend to correct themselves unless the habit persists while permanent teeth are coming through.

The authors caution against advice that crooked teeth in children sometimes correct their position. This may sometimes be true, but the most important advice is that children with irregular teeth

should be taken to a dentist early. Crooked teeth are not always a health hazard if the irregularities are slight, but the decision should be made by the dentist, not the parents.

The authors also assert that there is no basis for the common belief that criminals and other socalled "enemies of society" tend to have irregular teeth.

As to dental care they object to the advice that a dentist should be consulted only when a cavity is noticed in baby teeth. It is advisable that a child be taken to a dentist regularly, beginning at two years of age, without waiting for cavities to appear. They deny



that tartar deposits on the teeth are a common cause of bad breath. They do not recognize evidence that any diet will "keep your teeth hard and strong." Therefore, they do not admit that food *alone* can either make or keep teeth or body healthy.

Naturally, it does not necessarily follow that teeth will be good if diet is correct, though admittedly the right diet is probably one factor in preserving the health of the teeth. Although they deny that refined, civilized foods are primarily responsible for tooth decay, they are not willing to admit that these may be used without harm even when the so-called protective foods (milk, fruits, vegetables) are present in the diet in adequate amounts. They do not confirm the view that chewing gum is beneficial to the teeth. They object violently (and properly) to promises made to children that eating certain foods will

make the child's teeth grow straight.

As far as brushing the teeth is concerned, the authors reject much of the common advice on the ground that it is impractical; as, for example, advising that the teeth be brushed upon arising, after each meal, and before going to bed. They do not encourage the use of toothpicks or of dental floss by children. They deny that stains and dirt are directly related to teeth that hurt, or that brushing will necessarily prevent stains or the formation of tartar on the teeth. To the claim that clean teeth and a healthy mouth will result from a few good brushings a day, they retort, "Ob-viously not true." They say that a mouthwash is not a hygienic necessity.

As for general health rules, they believe that few of them have anything directly to do with dental health. Tooth-brushing will not even make your breath sweet, if bad breath is caused by decayed teeth or internal trouble.

The difficulty with telling the lay public what to do about their teeth is that scientists themselves are not in accord. An example of scientific disagreement is the controversy over sugar in chewing gum which some observerers believe will harm the teeth, while others advise chewing gum for the sake of the exercise it supposedly gives the jaws and teeth. Cereals (presumably whole-grain cereals) are recommended by some writers among foods good for the teeth, while others advise against them. Some observers believe that nutrition affects the teeth after they are fully formed, while others do not.

There is no agreement as to when brushing of a child's teeth should be begun. Some advise toothbrushes with well-spaced tufts of unequal length; others recommend bristles of unequal length; still others say that the shape of the brush is not important, and others emphasize the importance of brushes of certain shape.

Even, care of the toothbrush seems to be a source of controversy. Advice is given to hang the toothbrush in the sun to dry, but on the other hand appears advice that the toothbrush should be protected from dust. The comment of the authors is that the advice is impractical, since if brushes hang in the open air they will gather dust and if they are protected by glass they are not exposed to enough sunshine to kill many germs.

At the risk of appearing in an unfavourable light in a subsequent evaluation of dental health literature, this writer gathers from the interesting and valuable study by Doctor Irwin and Mrs. Wilson that there is no positive assurance that anything we do will assuredly guarantee good teeth.

We must not rely solely upon diet for tooth health; yet it is a good thing to eat the kind of diet advised by nutritionists. We cannot depend upon cleanliness alone for mouth health and sound teeth; yet there is virtue in keeping the teeth clean and the mouth reasonably sweet. We can accomplish this without the aid of a mouthwash. The authors do not venture far into the highly controversial field of what dentifrices are safe, or which, if any, are essential.

The one idea which stands unchallenged is that early and frequent dental care will do more than anything else to preserve good teeth or restore damaged teeth. This at least is one positive bit of advice which comes out of their evaluation. Until something new and non-controversial develops out of continuing dental research, that is about all the tooth truth that we can really get our teeth into.

KEEPING FIT AFTER SIXTY

HE mortality statistics of our great insurance companies prove that as the result of better conditions the average person today has a greater chance of living longer than his forefathers did, barring accidents.

But there is all the difference in the world between living to a good old age and merely existing. How many of the old people we know are really healthy? So many complain of various ailments—bronchitis, rheumatism, sciatica, heart trouble, and a score of minor ills —that we wonder sometimes if their lives are worth living.

If we want to enjoy old age we must obey certain simple rules which will prevent our joints from stiffening up and our bodies from being racked with various aches and pains.

Diet is one of the most important things for people getting on in years. They are inclined to eat too much, and, as they do not take enough exercise as a rule, they grow flabby and fat. Elderly people need very little food and the simpler the better. An alderman at a city banquet was explaining to his neighbour why he ate with such gusto the rich food provided. "You know, old chap," he said, "when one gets to our age

By "Sixty-Seven"

there is nothing left but the pleasures of the table." Poor fellow! Little did he realize that he was digging his own grave. Elderly people should drink plenty of pure water, hot or cold, and eat plenty of fruit and vegetables, avoiding large helpings of meat of all kinds.

Exercise is essential to everybody, and even the old cannot dispense with it. Walking is still the best exercise, but when the weather keeps us indoors a few simple exercises performed in a well-aired room make a good substitute. Nothing violent is desirable. No extra strain ought to be thrown on the heart, but bending and stretching exercises of all kinds are most beneficial. Try also flexing your various muscles in turn so as to retain full control over them. Above all try to get rid of those puffy inches round the waist-line which begin to accumulate so quickly when we start to take life more easily. Lie on your back on the floor and kick your legs about or raise them up stiff and straight a few times once or twice a day. Twisting the trunk from side to side also helps.

Most of us lose much of the benefit of our walking by slouching along slackly. You get the best out of this exercise by carrying yourself erect, head up, chin in, chest full out, stomach drawn right in. Breathe as deeply as you possibly can as you walk. Breathe out and in by means of the abdominal muscles, keeping the chest expanded all the time so that every cell of the lungs may be filled with the life-giving oxygen.

Most of us do not use half of our lung capacity. Actually we can live-or rather exist-by using only 20 per cent of our lungs; the other 80 per cent lying inert and half dead, ready to provide a home for any tuberculosis or other germ which may be looking round for a suitable home. Doctors often advise patients to practise deep breathing before an open window each morning when they get up. Better still, practise it all day long, especially when out of doors. Life will then have a zest it never had before, and you will feel so fit it will be a joy to be alive.

Lastly, learn to relax. When you do sit down, or lie down to rest, relax every muscle deliberately and consciously and close your eyes. Fifteen minutes of such relaxation, the mind relaxed as well, will refresh you more than an hour of tense, strained sitting, worrying about something all the time. I speak out of long experience.

ARE THERE ANY SAFE SEDATIVES?

Edward Hoehn, M.D.

ODAY there are so many things to jar one's nerves. It may be worthless, jangling, irritating jazz that floats in through your windows over the air, or the startling announcements in the newspaper, or business reverses, or perhaps that boy or girl of yours in service. Be what they may, all these things take their toll of your nerve energy. These are the problems we must face. They raise the question: Are there safe sedatives-sedatives that will carry us through all nervous troubles? To simply say yes or no would not safely answer so broad a question as this.

First, let us briefly consider a few of the sedatives. How do they act? What effect do they have on the system? Are they body builders, or do they destroy? Are they a tonic, or do they throw further burden upon the body?

To make the discussion more convenient, we will classify these drugs into five general groups: (1) the opiates, (2) the barbiturates, (3) the bromides, (4) the alcohols and their derivatives, (5) the analgesics, as coal-tar derivatives with the sedatives added to them. It would seem that with such a long list as this to choose from, surely one could easily find a safe sedative. There are liter-ally hundreds of different chemical variations of the above drugs, and each new one that comes out is supposed to be just a little superior to all the rest of them.

The large number of these drugs reminds me of a statement by one of my instructors in college. He was discussing the different operative techniques for a

MAY 1944

"Is it safe?"

certain condition and said that he thought that there were about eighty different procedures discussed in literature for this one condition, and he concluded with the rather enlightening comment that the reason there are eighty operative techniques for one condition is that there is not one good one. If there were one good one, that would be enough. There would be no need for the other seventy-nine. I wonder whether that same comment might apply to our ever-increasing number of sedatives. Is it possible that this endless, feverish search for a better sedative throws some light on what these scientists think of the sedatives we already have? Are they in a vain search as was Ponce de Leon for his Fountain of Youth?

Let us examine these different sedatives and see why we are still searching.

The opiates. We need spend little time on these, as everyone knows something of the demoralizing and character-weakening effect they have on the addict. The habit is always worse than the disease for which they are taken. These opiates should be used with the greatest caution and only under a doctor's orders. Never should they be used merely as sedatives.

The barbiturates. These are also habit forming, but the addict is not so demoralized as are those who use opiates. It takes considerably longer to form the addiction, and it is easier to break away from it. The drug is depressing and some patients develop a definite melancholia from its use.

The bromides. These are slightly habit forming. They are toxic (poisonous) and are also depressing. I have seen cases so badly depressed that they were thought to be insane.

The alcohols and aldehydes are habit forming, the habit having a demoralizing effect upon the patient. They also are definitely toxic, damaging the liver.

The aspirin or acetanilid derivatives. These are used largely for pain, but some patients use them as sedatives, especially in combination with one of the above drugs. Such combinations, of course, carry all the dangers of the drug that is added, plus the toxic effect of these coal-tar derivatives. Although some of these drugs are only slightly toxic in the recommended dosages, they are all toxic, thereby adding an extra burden upon the already overworked body. The body now has to battle not only with the original trouble, but also with the effect of the drug. Some of these drugs never develop true addiction, but they are what might be called habit forming because they become a crutch that one learns to lean upon, and any habit-be what it



may-that interferes with the normal function of the body is to be avoided.

All these drugs are definitely toxic, their effect not being produced by a wholesome building up of depleted nerves or by supplying anything the nerves require. They are not a nerve tonic in any sense of the word. These aching or jumpy nerves are the sentinels that warn us of impending danger to the delicate human mechanism. If these sentinels are put to sleep by the anæsthetic action of sedatives, then a dangerous condition may be made tolerabic or so quieted as to be entirely overlooked until it is too late to do anything.



With the facts thus clearly placed before us, the reason for this endless search for an ideal sedative becomes self-evident—we are looking for what has not yet been found. This is rather a disparaging picture and the reader will wonder whether or not he should ever use a sedative. In answer, I would state that a sedative should be used only when it is necessary, and *then* it must be used intelligently.

Doubtless some of you will ask, "How can one use intelligently any drug which has no bodybuilding properties and which only puts the body sentinels to sleep?" The value of sedatives lies in the fact that the body does need rest, relaxation, and quiet to build up, and these are difficult to get when

one's nerves act like a noisy alarm clock and keep one on edge all the time. It can be clearly seen that to take a sedative purely for the purpose of relaxing one's nerves or getting a night's sleep, with no definite plan to build up the body and nerve stability, is like borrowing money without any plans to pay it back. A financial scheme of that type would soon ruin one's business. In like manner, a health plan where one merely numbs one's senses, without any constructive treatment to build up, will soon wear out the delicate human machinery.

If, on the other hand, one adopts a plan of giving the body its necessary rest and relaxation and couples with that a healthful living regime, then, and only then, can he be justified in taking sedatives to help him get the reouired rest, sleep, and relaxation. However, this period of taking sedatives should not run into months, and certainly never into years.

Your food may contain the sedatives you need.

Having answered that phase of the subject, I would like to repeat the nuestion, "Are there any safe sedatives?" and answer definitely, "Yes," by approaching our subject from an entirely different angle. I shall introduce this new approach by calling attention to common medical knowledge.

I believe it is a generally recognized fact that the behaviour of laboratory animals, and especially rats, depends largely upon their diet and environment. Rats fed on highly refined foods, as unenriched white bread, polished rice, jam, iellies, sugar, soft drinks, pies, and ice cream, do not have the nerve stability of the rat on a balanced diet. These foods that are refined have lost something which has a sedative, nerve-stabilizing effect upon the experimental animals.

The same thing has been observed among people. Certain localities have definite customs and diets. In certain localities polished rice or refined foods are simply not used, while in other localities it is a disgrace to eat natural foods. Brown rice is called dog food and no one would consider eating it. We are told that the people of the two localities are as distinctly different as is their diet. The ones on the natural diet act natural; they respond as a normal human being ought to respond, whereas the ones who live in the refinedfood zone are nervous, irritable, and obstinate, and are constant troublemakers.

Our readers have no doubt observed this. Families who use large quantities of sweets or refined foods complain of more nervousness, sleeplessness, tenseness, and irritability than do their neighbours who live more naturally.

Yes, there are safe sedatives, though they are not called sedatives in medical books. Some of these sedatives are found in our chemist shops under the names of vitamins and minerals; but in your Victory garden, orchard, or farm you have an abundant, inexpensive supply. There is nothing that gives such nerve stability as proper living, with nlenty of sleep and natural, unadulterated, wholesome food.

Our nerves are not as hadly shocked by the newspaper, headlines and radio reports as they are by unbalanced menus.

Fruit Juices Promote Health VIOLA Fruit Crushes Are Prepared From Choice Fresh Fruits By Modern Processes FIVE KINDS Mango, Orange, Lime, Pincapple Lemon Barley Water Sold at all Good Stores or Direct From MODY & CO. 265, Princess Street, Bombay.

N years to come, building blocks, crayons and puzzle boards may well take their place beside the stethoscope and tongue depresser as tools of the pediatrician's trade. When they do, it will be a tribute to Dr. Arnold Gesell and his associates in the United States at Yale University's noted Clinic of Child Development, For more than twenty-five years, Doctor Gesell has been plugging away at the thesis that medicine must be concerned with all aspects of a child's development, not merely with physical disorders. To him, the testing and supervision of behaviour are as much a part of pediatrics as the diagnosis and treatment of the mumps.

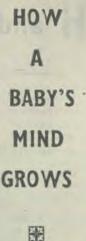
But whereas the diagnosis of a swollen jaw is a relatively simple matter, the interpretation of behaviour presents many problems. What does it mean if a two-yearold is able to build a tower of ten blocks or a six-month-old infant disregards a proffered rattle? Like any scientist, Doctor Gesell would not venture an explanation on so little evidence, but if he had examined the babies under what he calls a sample life situation, if he had studied the case histories and medical reports, he might tell you that the two-year-old would become an unusually gifted adult and the baby was a mental defective.

His interpretation would be based on his unique knowledge of what pre-school children can be expected to do at any given age.

He can tell you, for example, that most two-year-olds can build a tower of only seven blocks and that at six months most babies will grasp and shake a rattle. The monumental task of working out a yardstick of infant development has occupied most of Arnold Gesell's professional life.

The first problem in working out that yardstick was to evolve an examination technique that, unlike the Binet intelligence test, would reveal not merely intelligence but all aspects of behaviour—physical abilities, language, judgment, and social adaptability. The system which was finally evolved consists

MAY 1944





simply of recording how a child reacts to carefully selected toys and problems, and how he copes with the situations of everyday life.

Some ro,000 children have been thus tested at the Yale clinic. More than 500 tests were given to a picked group of average youngsters and were recorded in 3,500 reels of moving pictures and volumes of minutely detailed description. When all this material was assembled and correlated, it became evident that mental growth is one aspect of physical growth and follows just as definite pattern.

Marked deviations from that pattern call for diagnosis and treatment. It also became evident that, on the basis of behaviour during the first months of life, a knowing physician could predict a child's development in later years.

Doctor Gesell and his associates have put their prophetic abilities to good use in testing babies who are to be given for adoption. Take the case of an infant who is about to be adopted by an unusually gifted couple.

Can the child ever live up to his would-be parents' expectations for him? The clinic staff has an amazing record of accurate predictions.

Or take the case of a baby whose background is obscure. Is he a good adoption risk? Is the child normal in every respect? Again the Yale staff can provide an answer. Virtually every form of mental deficiency can be

diagnosed during the first year of life, frequently during the first months.

Mental deficiencies are by no means the only explanation for abnormal development. Sometimes the trouble lies in an unrecognized physical handicap—a sensory defect or an injury to the brain at birth.

For example, a two-year-old was brought into the clinic as a problem child. He had temper tantrums, screamed, was stubborn, would not talk. He was becoming increasingly unmanageable. During the first few minutes of his behaviour examination, Dr. Catherine Amatruda, second in command to Doctor Gesell, recognized what was unsuspected—that the child was deaf. Frustrated by his inability to communicate, his entire personality was becoming warped.

Frequently, difficulties arise from the improper handling of otherwise normal youngsters. Overambitious parents typically expect their hopefuls to rise to behaviour heights for which the child is simply not sufficiently developed. Just as it is useless to try to teach a baby to walk until he is ready, so is it useless-and often dangerous-to try to force social education. In nine out of ten cases. Doctor Gesell's advice to worried parents is to urge them to have faith in nature's laws of development. What looks like a problem is often no more than a psychological growing pain .-United States Office of War Information

The Latest in HEALTH and SCIENCE

Grant for Collecting Information on War Medicine

A CRANT of \$75,000 was recently made in the United States for collecting up-to-the-minute information on war medicine and making it available to members of the American medical profession. The money is being provided by the Johnson and Johnson Research Foundation to the National Academy of Sciences and the National Research Council. The grant is for the purpose of providing adequate current information to the medical officers of the armed services both in the United States and abroad, and to make the experiences of war medicine available to civilian physicians. Various medical reports, both civilian and milifary, will be culled for pertinent information, and bulletins containing current advances in medical practices and research which are not military secrets will be issued.

Pillow Bandage

At the recent convention of the Association of Military Surgeons in the United States, a new pillow bandage replacing a tourniquet was described. The bandage is made of cotton fabric stuffed with mechanics waste (coarse white cotton thread which mats easily), and by applying gentle pressure to the wound, stops bleeding. It can be safely left in place for two weeks, unlike tourniquets. The pillow bandage is easy



... It means that you are threatened with gum-rot l Serious gum disease — pyorthera or gingivitis — is probably preparing to rob you of your teeth and undermine your health. Use Gibbs "S.R." Toothpaste to combat this danger — it prevents and atrests gum disease. The Sodium Ricinoleate it contains is what dentists use in the treatment of gum troubles. Regular use of Gibbs "S.R." will keep your gums healthy and your teeth sound.



to apply, and there is no danger of even an inexperienced person making it tight enough to interfere with the blood supply.

Health Insurance in U.S.A.

HEALTH insurance in the United States is becoming more and more widespread. It has now reached the point where hospital insurance covers 13,000,000 persons on a Blue Cross plan and is operating in 36 of the 48 States. About 4,000,000 more people are covered by commercial plans for hospital insurance. Some 800,000 have insurance for medical care sponsored by medical societies in 12 States, and there are hundreds of industrial plans covering all varieties of health insurance.

Toxold to Prevent Gas Gangrene

LIEUTENANT COLONEL B. N. CARTER of the U. S. Army Surgeon General's Office said recently that the development of a toxoid to prevent gas gangrene in war wounds is under way. The composition of the preventive was not disclosed, but it is similar to that used against tetanus. The United Nations now have at their disposal a gas gangrene antitoxin for use after infection has set in, but up to now there has been no material to prevent its onset.

Post-War International -Co-operation

Post-wAR international co-operation is already getting under way in the field of health protection. Signs of action as well as an intense desire for all nations to work together to protect the health of all people everywhere appear in statements made by health directors from Great Britain, the Soviet Union, China, Egypt, Australia, and seven Latin American countries to the wartime conference of the American Public Health Association.

Treatment for Erysipelas in Infants

IT HAS been reported by the University of Louisville (Kentucky) School of Medicine that infants over one month of age who developed

erysipelas and were treated with take the form of poor functioning.-sulfanilamide and the application Good II calth. of packs of magnesium sulfate, recovered in virtually every instance. Moreover, the stay in the hospital was reduced by 50 per cent. The use of erysipelas toxin and ultraviolet rays was not necessary.

Indiscriminate Use of Vitamins Harmful

IT is argued that since the diet of many people is deficient in vitamins, the taking of massive doses of them can do no harm except for the waste of money this practice involves. Agnes Fav Morgan of the University of California does not agree with this view, as she states in the Medical Woman's Journal. There is possible damage, she thinks, from the heavy doses of vitamin A given to aviators, although this is not absolutely proved. Too much vitamin D may cause calcification of the kidneys and the formation of kidney stones. The intake of vitamins A and D should be balanced. In certain regions of India where sunshine insures plenty of D, but A is scant in the food, there are many cases of kidney and bladder stones. Fish oils may contain so much D that they are not suited for adult consumption. Heavy, black molasses has been recommended for the B vitamins, but it is so full of accumulated debris as to make it unfit for food. -Good Health.

Eating Between Meals

GROWING children are likely to eat candy, cake, or sandwiches between meals. and many of their elders also indulge in this practice. This was revealed incidentally in a diet study carried out among private patients in a Philadelphia hospital. Forty-two per cent admitted eating at other than meal times. This took no account of drinking fruit juices or milk or partaking of fruit, which were supposed not to interfere with appetite. Since these persons were sick, it is possible that this habit had in some instances played a part in bringing on the illness. In that case. the proportion in the general population would be somewhat less. This indulgence in "snacks" is cer-tainly a factor in the overweight which is so common in this country [America]. Moreover. it puts a needless burden on the digestion. The stomach is as much entitled to rest as the body as a whole, and its protest against ill treatment may

MAY 1944

Food Value of Grass

A GREAT deal of discussion has taken place concerning the food value of grass for human beings. Unlike herbivorous animals, we are not provided with an extremely long appendix which houses special bacteria for the digestion of cellulose. All plant foods are made up of innumerable small cells which are walled off by cellulose. Since we cannot digest this substance, which is a carbohydrate, we cannot use grass as an energy-expressing food. However, by mastication we can crush these cells and liberate the contents. It has been stated that man does possess some bacteria capable of digesting cellulose. The results obtained by people such as Mr. J. R. Branson, who have lived largely on grass, suggests that digestion of the cellular contents may occur by the enzymes passing through the cellulose walls and the resulting products diffusing out again.

Grass in the voung stage is very rich in body-building protein. Most noticeable of its properties, however, is its extremely high vitamin content. It probably has the highest mixed vitamin content of any plant. Taking an average value for other fruits and vegetables, we find that grass has:

40	times	the	amount	of	vitamin	A
10	27	99.	99	55	55	BI
25	37	22	79	22	99	B ²
14	95	.99	72	95	35	С

In addition, it is extremely rich in the other factors of the B complex. and in vitamin F. Indeed, the only vitamin of which it is not a good source is vitamin D.

The chief difficulty in the way of our eating grass is that, if caten in quantity, the high fibre content might have a strong laxative action. Nevertheless, it seems all wrong that such a valuable food element should be entirely neglected .- Ilealth for All.

Cadaver Graft

THE first clinical use of cadaver nerves to graft severed nerves in humans, using acacia glue instead of sutures to join the severed ends, has been reported by three U. S. physicians in the Journal of the American Medical Association. The physicians wrote. "The first patient already has a good clinical result

with return of motor and sensory The second patient is function. already beginning to get return of The third case is too function. recent to make it possible to judge." In the three cases reported, flaps of the nerve sheaths were cut from both sides of the growths at the ends of the severed nerves. The cadaver graft, carefully cut to fit the gap, was then placed in position and glued to the two severed ends of the nerve. An ordinary snugfitting bandage was used, and no further immobilization was necessary.

WERE YOU **DISAPPOINTED**?

DID you subscribe to the ORIEN-TAL WATCHMAN AND HERALD OF HEALTH, asking that back numbers may be sent you? Perhaps you desired to begin your subscription with the first number of the year, although several months may have elapsed in the year before your order was received. Ordinarily we would have been very happy to accede to such requests, and would be still, except that there are certain conditions in the way.

Our subscribers will realize, we are sure, that there is a great shortage of paper, and paper is very difficult to obtain. We are not now able to print extra copies, as we did before the war stringency. Therefore, it is not always possible for us to supply back numbers of the magazine. Indeed, we cannot muarantee to begin subcriptions with the current issue if subscriptions are received in our office later than the 5th of the month of issue. In every case, we begin the subscription with the next issue.

We are sure that our subscribers will understand the position. It is merely a small part of the effort to win the war.

Customers may check the expiry date of their order by reference to the wrapper.

We are glad to supply back numbers whenever they are available.

HOME

and

CHILDREN

HONOUR BRIGHT

ES, mother, 1 will, honour bright! Did you ever know me to break my promise?"

"No, my son, I never did," and Mrs. Dunning stroked the brown curls lovingly as she looked down into the honest eyes that never in all Harry Dunning's fifteen years had failed to look straightforwardly back into hers.

"Well, mother, you never will. I'll be home by ten, sure. Now I'm off!" and Harry sprang down the steps and was away like an arrow.

His chum, Alden Mayhew, had invited him to a "general good time." and Alden's invitations were always accepted by his boy and girl friends.

No wonder that Harry couldn't believe his own eves when, in the height of his fun, he looked up and saw the hands of the clock pointing to a quarter to ten! No one looked as though even thinking of going home. But Harry's "honour bright" promise rang in his ears. Nobody guessed the struggle that was going on in the boy's heart as he mechanically performed his part in the merry game.

"Why can't I stay until the rest go? Don't I work hard enough? And I haven't had an evening out for weeks!"

It was all true. Very few and far hetween had been his "good times" since his father died, two years before, when little Daisy was a baby, and left him to be the support and comfort of his mother.

"It isn't late," he thought, irritably. "Mother's only nervous." Then his cheek reddened. and he straightened up quickly. Who had a better right to be nervous? he thought, fiercely, as though fighting an invisible foe. His sweet, invalid mother! And he knew little Daisy was not well. And he had promised! Abruptly he excused himself, bade hasty good-nights, and sped away across the fields, putting on his jersey as he ran. His mother met him at the door.

"Daisy is worse," she whispered, huskily. "It's croup. Run for the doctor-quick!"

And Harry ran—ran as he had never dreamed he could. And the old doctor, electrified by the boy's breathless energy, made ready in an incredibly brief time, and drove off down the hill.

The keen-eyed old man looked very serious as he bent over Daisy; but he was a skilled physician, and before long the little girl was breathing easily again.

"But let me tell you," he said impressively, "ten minutes later it wouldn't have been of much use to call me or anyone else."

Harry listened silently; but when they were once more alone he drew his mother down by his side on the shabby little sofa, and told her of the resisted temptations.

"And, oh. mother," he concluded, "I'm so glad I kept my promise. 'honour bright!" I feel as though I'd just escaped being a murderer."

"I have perfect confidence in my brave, true laddie," said the happy mother, stroking the bonny head bowed on her shoulder.—Selected.

M M M What Bobby Found Out

EMMA F. BUSH

OBBY wiped away the tears that would run down his hot cheeks in spite of all his efforts to keep them from coming. "She did it on purpose," he muttered, as he wiped the tears away with the back of his hand. "She did, and I'm glad I was mean to her." He did not look glad as he sat in the chair where mother said he must stay until he told his sister Stella that he was sorry that he had hit her.

Bobby had been happy until now. Yesterday had been his birthday, and among his other presents was a great big box of blocks from Uncle Albert. They were not blocks bought in a store. Uncle Albert had made them himself, and he had cut them all shapes and sizes, and there were ever and ever so many of them. -all that a boy could possibly use to build, oh, so many, many things.

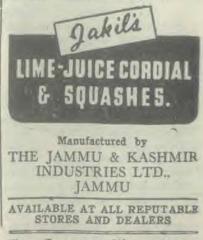
All morning Bobby had been at work on a castle he was building from them. It was a beautiful castle. There were places for windows in it, and a high tower at each end, and a drawbridge, too. As Bobby finished, Stella came into the room.

"Oh, Bobby!" she cried, "what a beautiful castle. May I bring my doll to live in it?"

Just as he said that the collie puppy that daddy had given them



A drink that is a drink for all seasons certainly demands consideration even from those with fastidious tastes. And although there are many varieties of squashes discriminating people always select Jakil's Lemon, Orange, Mango and particularly Lime Juice Cordial because of their freshness and purity.



for Christmas a few weeks before, came romping along. He bumped right against Stella, and she lost her balance and fell on the lovely castle that had taken so many hours to make. It went down in ruins,

It was then that Bobby struck her. "Because I wouldn't let you keep your old doll in my castle." he cried angrily, "you knocked it down."

"I didn't." sobbed Stella, and then mother had come to see what the fuss was about. She listened with a grave face, then she put Bobby in the chair where he must sit until he told Stella he was sorry.

He could hear mother working in the kitchen, but he wondered where Stella was. It was almost lunchtime, and he wondered if mother would give him any lunch. He wouldn't say he was sorry, when he wasn't, even if he starved.

All at once he heard Stella's voice. She was under the window and she was scolding the puppy because he had pushed her into Bobby's castle to knock it over. Why, Stella wouldn't have fallen if Shep hadn't pushed her!

All at once he began to feel sorry. Perhaps it wasn't Stella's fault after all. Shep had pushed her! It wasn't nice to hit a girl. He would find Stella and say he was sorry, anyway.

Quickly he jumped up, but he had forgotten that his feet were twisted in the rungs of the chair, and down he tumbled right at the minute Stella was coming in the door. Chair, cushion, hoy, and all landed almost at her feet.

"Oh, Bobby, are you hurt?" cried Stella, running to untangle him.

"No. not hurt, only surprised," laughed Bobby. "I am sorry I hit you. Stella. I did not realize how easily anyone can fall."

"I am sorry about your castle," said Stella, "but. Bobby, Shep really pushed me over."

"I know. I heard you talking to him." answered Bobby, "but I can build my castle again. I am going to build a better and bigger one after lunch, and you can put your dolls in it. They can be the castle ladies waiting for the knights to come back from the wars, just as they did in olden times."

And so. after lunch was over, two happy children played together all afternoon, and there wasn't a cross word spokent

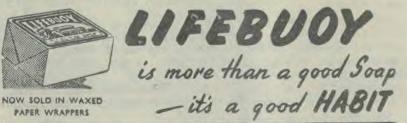
MAY 1944 .

aren't you thankful he's protected from "dirt-danger"

He's never without a pet of some kind-any kind-the boy's just crazy about animals! And he A doesn't love them any the less when they've been rolling in the dust. It really is a blessing he's got the Lifebuoy habit-for goodness knows what dirt and germs he must pick up.

Such a lot of mothers would be worried sick but for the protection Lifebuoy gives against dirt-danger. We all know there are germs in dirt-germs that are very dangerous to children - that may cause serious illness, spread infection. But when children wash regularly with Lifebuoy Soap there's nothing to worry about. Lifebuoy is an antiseptic soap-it contains a special bealth - protecting element that has made it world-famous. No other soap in India has this same safeguard.

1 49-169



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ALWAYS making

a fuss of some

animal !



MEATLESS RECIPES

VEGETABLE CHOWDER

r cup chopped carrots; r cup chopped turnips; r cup chopped celery; 3 cups diced potatoes; 8 cups water; 34 cup butter or vegetable fat; 3/2 cup diced onions; salt.

Mix together all the vegetables except the potatoes and simmer in the butter ten minutes. Add the potatoes and cook in a covered pan for five minutes, then add the water and cook until the vegetables are tender and can be forced through a colander. To the purce add the seasoning and the parsley. Reheat and serve.

SCALLOPED LADY FINGERS AND TOMATOES

2 cups ladv fingers; 2 cups tomators; 1 small onion; 2 cups breadcrumbs; 1 tablespoon butter or vegetable fat.

Season the tomatoes with salt. Fill a baking dish with lavers of tomatoes, lady fingers, sliced onion, bread-crumbs, and bits of butter. Top with the crumbs and dot with butter. Bake thirty-five minutes and serve.

TOMATOES CLAIRE

6 whole tomatoes; r onion; 3/2 cup bread-crumbs; 3 cloves; 2 teaspoons salt; 6 eggs.

Stew the tomatoes with seasoning until most of juice has evaporated, add the crumbs. Place in an earthen baking dish and drop the eggs on top of the tomatoes. Cook until set and serve at once. This is also an attractive luncheon dish. PURE WATER

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EGGS POACHED IN TOMATOES

Take one pint of tomatoes and cook in a shallow dish, or frying pan, until very tender, adding salt to taste. When just beginning to hoil, slip in gently three or four eggs, taking care to keep the yolks whole. Keep the tomatoes just at boiling point until the eggs are cooked. If the flavour is agreeable, a little onion, grated very finely, may be cooked with the tomatoes. Serve hot on buttered toast and garnish with parsley.

SCALLOPED POTATOES

Pare potatoes and slice them; grease a pie-dish and put a layer of sliced potatoes in; sprinkle a little salt and flour, finely chopped parsley, and minced onion over each layer, until dish is nearly full. Pour over sufficient milk nearly to cover and place a few small pieces of butter on top. Cover with another dish and steam until tender. Then remove the top dish and allow to brown lightly. Serve hot and garnish with parsley.

MOCK TURKEY WITH DRESSING

I cup dal; ½ cup chopped walnut meats; r cup milk; salt; bread-crumbs; ¼ cup minced onion; r cup chopped celery; s eggs; sliced bread.

Thoroughly wash the dal, boil slowly until tender, and run through

a colander. Add the walnut meats, one egg, and the minced onion browned with the chopped celery in a little oil. Add salt and sage to taste. Thicken with bread-crumbs. Bake in oven.

1945

28th January

DRESSING NO. 1

1/2 loaf stale bread; z cups cold milk; r or z eggs; r tablespoon butter.

Crumb the bread, and soak in the milk. If the bread does not take up most of the milk, pour off some of it. Stir in beaten egg, add season with salt, sage, butter, and onions.

DRESSING NO. 2

2 large onions; 1 cup stale bread, crumbed; 34 cup milk; 1 tablespoon sage; 2 eggs, beaten; 2 tablespoons parsley, chopped; 34 cup butter; salt to taste.

Peel and parboil the onions. Drain, and chop fine. Soak the bread-crumbs in the milk, then mix all the ingredients together. Bake until set. Serve a slice of roast with a spoonful of dressing on one end and jelly on the other.

BAKED BANANA NO. 1

Select firm, not overripe bananas, put them into a hot oven without removing the skins, and bake until the skins are dark and they begin to burst. Serve at once. The starch

which has not been transformed into sugar in unripe bananas is thus made digestible.

BAKED BANANA NO. 2

Remove the skins from firm bananas, lay in an oiled baking pan, and pour over them nearly enough lemon sauce to cover them. Bake until tender and slightly browned. Water and lemon juice may be used in place of lemon sauce, but are not quite so good.

LEMON SAUCE

1 cup water; ½ cup sugar; juice and rind of 1 lemon; 1 tablespoon butter; 1 tablespoon cornflour; a few grains of salt.

Bring the water to a boil. Mix the flour with the sugar, add to the boiling water, stir smooth. Let boil gently for a few moments. Add the butter, the lemon, and a few grains of salt. Mix well and serve.

GRAPE, PINEAPPLE, AND FIG SALAD

2 cups diced pineapple; ½ cup figs cut into small pieces; 1½ cups seeded grapes; 1/3 cup heavy cream; 1 drop almond flavour.

Add the almond flavour to the cream and whip it. Mix the fruits and combine the whipped cream with them. Serve in sherbet glasses.

STRAWBERRY SHORTCAKE

I cup cream; flour to make a medium soft dough; I tablespoon yeast; salt.

Warm the cream to about 70 degrees, and add the salt, yeast, and about two cups of the flour. Mix thoroughly, cover, and set in a warm place to rise. When well risen and lively, add the rest of the flour, and knead until perfectly smooth. Roll out about half an inch thick. Put into greased pans, brush the top with melted butter, let rise until about double its original size, and bake. Split, and fill with whole or crushed berries, sprinkled with sugar. Two teaspoons of baking powder may be used instead of the yeast, mixing it with the flour.

LEMON MIXTURE

Cook 3 tablespoons lemon juice, grated rind of 1 lemon, and ¹/₄ cup butter two minutes. Add 1 cup sugar and 3 eggs slightly beaten; cook until mixture thickens; cool.

MAY 1944





BLOOD PRESSURE: Ques.—"What can be done to prevent a 48-yearold man from getting high blood pressure? What diet should he follow?"

Ans .- Normal blood pressure for a man of forty-eight should not exceed 124 cystolic and 80 diastolic. The best measures for preventing increase of blood pressure is to maintain normal weight for the particu-lar height and age. Avoid eating more than required to maintain that normal weight level. Increase of weight above normal is a signal that food intake is exceeding safety proportions. Avoid a diet in which starches and protein foods exceed the proportion of one part to four parts of fruits and vegetables. The bowels must move as many times daily as there are meals. Frequent enemas are advisable where the tendency is to constipate. Some active out-of-doors exercise daily is advisable.

2

PAIN IN FINCER; VARICOSE VEINS; TONSILS: Ques.—"1. My left forefinger is very painful, as the result of my dog tugging at its lead. What can I do to relieve the pain? 2. Is there any treatment for varicosity of the testicles? 3. I have a small growth at the entrance of my mouth. Can it be removed? 4. Will an operation for tonsillitis require an anæsthetic?"

Ans.--1. The swelling in the finger is probably a small bursa resulting from the injury. Heat treatment continued over some time may cause it to disappear. Sometimes hot and cold applications are more effective than heat alone. Short-

The DOCTOR SAYS

This question and answer service, free only to subscribers, is intended for general information. No attempt will be made to treat disease or to take the place of a regular physician. In special cases, where a personal reply is desired or necessary, it will be given if a stanged, addressed envelope accommentes the question. We reserve the right to publish the answers to any questions sent in, if we deem them beneficial to our readers, though no names will be published. Address the Associate Editor (Doctor Says), and make questions short and to the point:

Dr. H. C. Menkel. Associate Editor of the Oriental Watchman and Herald of Health, who has charge of this department, "The Doctor Says."

Dear Subscribers:

Some of you have been subscribers to this magazine almost from the beginning in 1910. It was in that year that I brought out the first issue of HERALD OF HEALTH from Mussoorie. Since that early beginning the service has developed into the present popular Health magazine for all India.

During these years there has been great scientific development and much added information regarding individual and community health. The object of this magazine is to make such information available in simple, understandable language, so that India may profit by all these advances.

I am now taking leave of you for one year, to be spent in America, where I shall visit and study at various research and clinical centres with the object of bringing back with me new evidence and experience for still further improving our contribution to physical, mental, and spiritual health.

The encouraging letters and communications I have had from many of you, have developed a friendship which I value most highly. So I send to each of you this *au revoir*, and wish you the best of health. In the meantime, others will continue the same personal service.

Very sincerely,

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12

(Signed) H. C. MENKEL.

wave diathermy treatment is very useful for a bursa. 2. Varicose veins of testicle may be benefited by alternating hot and cold applications. 3. The growth in mouth will need surgical removal or removal by means of diathermy spark. 4. Tonsils in adults can be removed by local anæsthetic. Also, if not too badly infected, they can often be sterilized by means of diathermy current.

GROWTH: Ques.—"Can chronic, slight thyro-toxicosis be responsible for under-development?"

Ans.—The thyroid gland being associated with the growth process, any disorder in that gland may be reflected in disturbed growth process.

STOMACH DISORDER IN PREC-NANCY: Ques.—"I have had stomach trouble from early months of pregnancy. Reports show 'undigested food and fat present in stool."

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Is this condition inter-related with my pregnancy? Kindly advise."

Ans.—The presence of undigested starch and fat indicates failure of the digestive process covering these substances. This concerns the pancreas and liver. Desiccal capsules and pancreatic enzyme preparation is indicated. The latter you will find in preparations like Pancrepar and Epeptine. The condition is most probably due to the added strain of pregnancy and with care will correct itself after delivery.

p

MALNUTRITION: Ques.—"I am sixty-nine and extremely thin. I have constant pain in the abdomen and constipation. What can be done to help me?"

Ans .- From your age and description of physical problems, I conclude that the main cause is passing of time with its concomitant changes. Under such circumstances the best one can do is to adapt and adjust one's practices to fit the circumstances. You will need to discover what foods agree best, which and in what form of preparation your digestive and assimilative functions can accept and digest food. In the conditions of advancing age, it usually means that one must be content with such simple foods as porridge, milk, strained vegetables, baked potatoes, and compatible fruits. Usually it is a good practice to frequently add a course of additional vitamins, especially the B group. Calcium iodide is also a useful addition for both calcium and iodine. This should be taken in small doses of about half grain size at broken periods. For the soreness in abdomen and lumbago, try fomentations and daily warm water enemas.

3

PROTEIN; RAW SALADS: Ques.—"Is the daily consumption of 4 ozs. fresh curd enough for a man weighing 140 lbs. and taking no other protein? Is it advisable to take a half seer of ripe tomatoes and green salad vegetable daily?"

Ans.—Four ounces of satisfactory protein such as supplied by casein of milk, eggs, soy beans, fish, fowl, or meat is sufficient for the average person. Even less will meet the the protein needs of sedentary persons. Vegetables, fruit, milk, and a small quantity of whole cereal should be added for their essential mineral and vitamin supplies. It is considered good practice to vary the foods taken rather than continue with a sameness day after

MAY 1944

day. A salad meal daily is a very good dietary practice. This ensures partaking of a sufficiency of raw foods.

ECZEMA: Ques.—"I have had eczema on the palm of my hand and fingers several times during the past two years. At times there are painful cracks. Please suggest a remedy."

Ans.—Your skin problem may be of the type due to one of the following causes: Allergy, autointoxication, deficiency of the vitamin B group, particularly B², and nicotinic acid, or to some chemical irritant with which you come into contact. If the first or last named causes it, then it is a matter of discovering the items to which you are sensitive, and avoiding them. Vitamin skin problems require reinforcing the diet with additional B group preparation. For autointoxication, the bowels must be flushed out by means of daily warm water enema. External applications are of no value for internal causes.

HEADACHE; RINCWORM: Ques.-1. "What is the cause of frequent



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headache? Please advise medicine for relief. 2. Please give cure for moist ringworm."

Ans.-1. Headache is a symptom which may be produced by a variety of causes. There is no such thing as curative treatment for headache as such. Headache, as the name indicates, is an ache or pain somewhere in the head. This pain may result from an increased circulatory tension or from a depleted cranial circulation. Pain may result from slight eyestrain. When this is the cause, it must be obvious that taking medicines can never correct the cause, and therefore is no remedy. The cure lies in correcting the cause. Other persistent causes are to be sought in the ears, the nasal sinuses, so-called hiliousness, gastrio and intestinal toxins, indigestion, wrongly prepared foods, and had combinations at meals. Then there are such recognized independent headache characteristics as migraine, nodular (rheumatic) headache, brain disease, and still the list is not complete. You may gather from this how important it is to discover the exact cause for your frequent headache. Only thus can it be eliminated. It is harmful to make frequent use of powerfully depressing drugs. Constipation headaches can best be relieved by enemas.



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However, it is necessary to find by barium meal X-ray study the type of constipation and what course is necessary to follow for relieving the cause. 2. Obstinate ringworms require either ultra-violet or X-ray treatment.

KIDNEY INFECTION: Ques.—"A friend of mine is suffering from periodical attacks of severe pain in the region of the appendix. followed by vomiting and a rise in temperature. The next day he passes pus through the urine, and the symtoms disappear. Kindly suggest a remedy."

Ans.—The condition of your friend is evidently an infection of the kidney and ureter. Possibly a stone is lodged in the tube as well and blocking the free flow of urine and pus. This is serious, and requires surgical relief. An X-ray study should be done to determine exact condition.

FACIAL BLEMISHES: Ques.—"I have black spots on my face as a result of pimples. Kindly advise method of removal."

Ans.—The only effective way of removing the after-effects of pimples is to have them treated by the electrical desiccation needle. This is done by a diathermy electric current, and is very effective. Medicinal applications to the skin are of no value. The blemish is too deep.

DISEASED TONSILS: Ques.—"I constantly suffer from inflammation of tonsils, and take cold easily. My doctor advises removal of tonsils. Is there a remedy that will give permanent relief apart from an operation?"

Ans.—The only effective alternative to surgical removal is sterilization of infected crypts by means of diathermy desiccation.

2

CONSTIPATION; PILES: Ques.— "Can liquid paraffin or other cathartics be profitably taken periodically, say once a week, to cure constipation and a mild attack of piles? Could you recommend an ointment for piles?"

Ans.—For relieving piles, the idea is to keep the bowel contents soft. This is best accomplished by the use of paraffin. The persistent daily use of paraffin is not advisable as it interferes with absorption of vitamin B. Using it when necessary for the purpose would not be

MAY 1944



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objectionable. As a useful ointment I frequently prescribe "Anusol Haemorrhoidal Ointment." It is well to remember that in most instances piles are the result of circulatory stagnation in the liver, due to congestion of that organ. Dietary precautions and fomentations over the liver area, back and front, are useful measures. DELAYED DIGESTION: Ques.—"A friend of mine is suffering from constant constipation. Examining physicians have found stomach digestion takes eight hours, and there is excessive bile. If he takes more than one meal each day, he suffers pain and vomits. Would you kindly suggest a remedy?"

Ans .- The first essential is to

G1.

ascertain reason for the delay in stomach. Is it due to stricture, tumour, prolapse, lowered vitality, or other delaying factor? Until this is determined, the party will need to be content with one meal daily, as this seems all he is able to take care of. Treatment must be selected according to the nature of cause responsible for the delay. Remedies in form of medicine are of no value unless they fit the case.

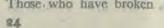
YOU NEED EXERCISE

Ellen G. White

A CTION is a law of our being. Every organ of the body has its appointed work, upon the performance of which its development and strength depend. The normal action of all the organs gives strength and vigour, while the tendency of disuse is toward decay and death. Bind up an arm, even for a few weeks, then free it from its bands, and you will see that it is weaker than the one you have been using moderately during the same time.' Inactivity produces the same effect upon the whole muscular system.

Inactivity is a fruitful cause of disease. Exercise quickens and equalizes the circulation of the blood, but in idleness the blood does not circulate freely, and the changes in it, so necessary to life and health, do not take place. The skin, too, becomes inactive. Impurities are not expelled as they would be if the circulation had been quickened by vigorous exer-cise, the skin kept in a healthy condition, and the lungs fed with plenty of pure, fresh air. This state of the system throws a double burden on the excretory organs, and disease is the result.

Invalids should not be encouraged in inactivity. When there has been serious overtaxation in any direction, entire rest for a time will sometimes ward off serious illness; but in the case of confirmed invalids it is seldom necessary to suspend all activity. Those who have broken down





Press Photo Agency

This is a bit strenuous.

from mental labour should have rest from wearing thought, but they should not be led to believe that it is dangerous to use their mental powers at all. Many are inclined to regard their condition as worse than it really is. This state of mind is unfavourable to recovery, and should not be encouraged.

Ministers, teachers, students, and other brain-workers often suffee: from illness as the result of severe mental taxation; unrelieved by physical exercise. What these persons need is a more active life. Strictly temperate habits, combined with proper exercise, would ensure both mental and physical vigour, and would give power of endurance to all brain-workers.

Those who have overtaxed their physical powers should not be encouraged to forego manual labour entirely. But labour, to be of the greatest advantage, should be systematic and agreeable. Outdoor exercise is the best; it should

be so planned as to strengthen by use the organs that have become weakened; and the heart should be in it; the labour of the hands should never degenerate into mere drudgery.

When invalids have nothing to occupy their time and attention, their thoughts become centered upon themselves, and they grow morbid and irritable. Many times they dwell upon their bad feelings until they think themselves much worse than they really are, and wholly unable to do anything.

In all these cases, well-directed physical exercise would prove an effective remedial agent. In some cases it is indispensable to the recovery of health. The will goes with the labour of the hands; and what these invalids need is to have the will aroused. When the will is dormant, the imagination becomes abnormal, and it is impossible to resist disease.

Inactivity is the greatest curse that could come upon most invalids. Light employment in useful labour, while it does not tax mind or body, has a happy influence upon both. It strengthens the muscles, improves the circulation, and gives the invalid the satisfaction of knowing that he is not wholly useless in this busy world. He may be able to do but little at first, but he will soon find his strength increasing, and the amount of work done can be increased accordingly.

Notwithstanding all that is said and written concerning its importance, there are still many who neglect physical exercise. Some grow corpulent because the system is clogged; others become thin and feeble because their vital powers are exhausted in disposing of an excess of food. The liver is burdened in its effort to cleanse the blood of impurities, and illness is the result.

Those whose habits are sedentary should, when the weather will permit, exercise in the open air every day, summer or winter. Walking is preferable to riding or driving, for it brings more of the muscles into exercise. The lungs are forced into healthy action, since it is impossible to walk briskly without inflating them

MAY 1944





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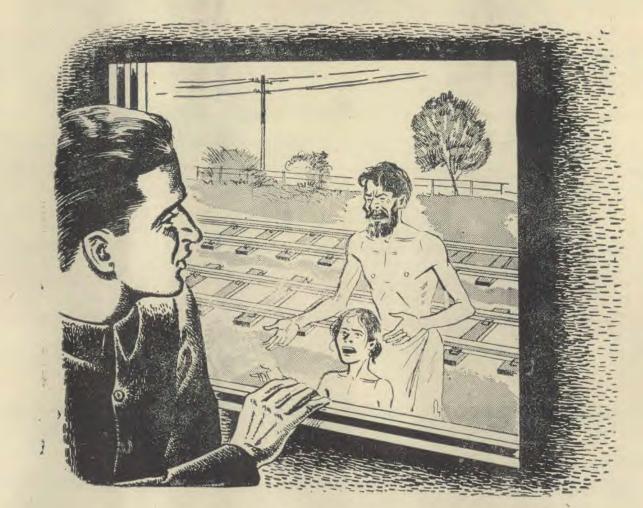
Already the shadow of coming events is cast on the fields of the herrenvolk. Soon their skies will be dark with the wings of the Allied scourge. The distasteful necessary task accomplished there will be Vita-Weat and other Peek Frean biscuits available for us in India. Right it is

> that for the moment these good things should be diverted to give pleasure to our men with wings.



THE ORIENTAL WATCHMAN

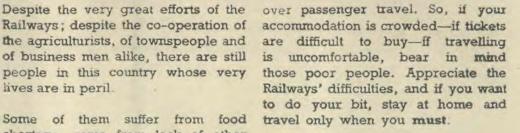
25



THE CRY OF DISTRESS

Railways; despite the co-operation of the agriculturists, of townspeople and of business men alike, there are still people in this country whose very lives are in peril.

Some of them suffer from food shortage, some from lack of other necessities of life. Mercifully, their number is getting less and less, but there are still many and their cry must not go unanswered. The Railways' first obligation is to them. The distribution of food and civil supplies must take precedence





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THE ORIENTAL WATCHMAN

MAY

SUPPLEMENT

1944

••THE BLOOD IS THE LIFE"

The Editor

S OMETIME ago, in New York, a thousand U. S. scientists were gathered together to witness a remarkable film, depicting the astonishing work of Soviet biologists. They had drained the blood from a dog. Then, fifteen minutes after its heart had stopped beating, they pumped the blood back into the lifeless body with an "autojector," serving as artificial heart and lungs.

In a short time movement was detected; the dog began to breathe; then its heart began to beat. In twelve hours the dog was on its feet, wagging its tail and barking, fully recovered.

Two other dogs upon which the experiment was performed in 1939 are still alive and healthy. However, fifteen minutes after the draining of the blood, the "autojector" is of no avail, as the body cells begin to disintegrate.

This remarkable experience reminds us once again of the "depth" of Bible record and teaching. According to the sacred record in a number of places, the Jews were warned "not to eat the blood with the flesh; for the blood is the life." They were reminded, as is recorded in the Old Testament and New Testament also, that sin required the death of the sinner—that is, the shedding of blood of the sinner. However, a way was provided whereby the sinner might escape, and that by the shedding of the blood of some



U. S. Marines stand on the shore of a Pacific island and view tour-engined Jap seaplane brought down by American gunners.

accepted animal. ("Without the shedding of blood, there is no remission of sin," says the Word.)

Therefore, for centuries, the Jews sacrificed animals for the remission of their sins. However, on the face of it, we see that the blood of an animal cannot of itself take away the sins of a man. (The Bible says, "It is not possible that the blood of bulls and goats should take away sins." Hebrews 10:4.) The sacrifice must have some other significance; it is a symbol of something else.

Its symbolic significance is clearly understood when we note the words of John the Baptist as he saw the Lord Jesus approaching him one day. "Behold the Lamb of God, which taketh away the sin of the world." John 1:29.

For centuries the Jews had been taught to look for the Messiah; and all their sacrifice looked to Jesus, the true sacrifice, as the confirmation and ratification of their centuries of animal sacrifice. The sacrifice of an animal does not recommend itself to God, nor has it any value except as a symbol. This the Scripture recognizes when it says, speaking of the sacrifice of Christ on the cross, "Sacrifice and offering Thou hast not desired, but a body hast Thou prepared for Me." Hebrews 10:5.

Obviously, sacrifices have no value except as they are a symbol of the real sacrifice,—that of the body of Jesus Christ, on the cross for the sins of mankind. Indeed, sacrifices are not now needed, nor are they of any value; nor are they permissible; for, Jesus Christ, "after offering for sins a single sacrifice of perpetual efficacy, took His seat at God's right hand."

IN THIS ISSUE: THE THIEF ON THE CROSS — A DIVINE CREATOR OUR LORD'S RETURN — "THOU GOD SEEST ME" Incidentally, the fact that the Jews were divinely instructed to offer sacrifices for centuries, which sacrifices were of no avail and had no meaning except as a symbol of the true sacrifice to come, Jesus Christ, is proof that Jesus Christ is all that the Scriptures and He Himself claim; otherwise, these centuries of Jewish sacrifices are meaningless.

The "blood" is still the "life,"

and eternal life becomes the gift of those who, realizing that their sins require the "shedding of blood," avail themselves of the sacrifice of Jesus Christ by believing in Him and serving Him.

THE THIEF THE CROSS

It was mainly due, no doubt, to the invention of printing that punctuation came into use; and it was indeed only by degrees that actual words were divided from one another by spaces within the line. Later came the distribution of words into sentences by means of points. Aldus Manutius, the great Italian printer and Greek scholar of the sixteenth century, introduced a regular system for these points or dots.

It is obvious, then, that the translators who supplied the punctuation put the comma in the wrong place, and in so doing, created an impossible situation. Let us put the comma in the place where rational Bible testimony indicates that it ought to be. This is what we have: "And Jesus said unto him, Verily I say unto thee today, Shalt thou [or, in normal order, "Thou shalt"] be with Me in Paradise."

The inverted order "shalt thou," may raise a question in someone's mind, although it need not, as that order is used often enough on occasion.

It might be interesting to give THE ORIENTAL WATCHMAN

THE Bible is very emphatic that after death the condition of man is one of sleep—unconsciousness. The overwhelming evidence of Bible testimony is to that effect

That being the case, it is unfortunate that just one, or two, Bible texts which seem, upon casual notice, to teach otherwise, are presented as contradicting the great mass of clear Bible testimony.

Such a text is Luke 23:43, which reads: "And Jesus said unto him, Verily I say unto thee, Today shalt thou be with Me in Paradise."

Now, a moment's reflection will convince any thinking person that the thief did not find himself in Paradise with Christ that day, for the very simple reason that our Lord Himself did not go to Paradise that day. In fact, after His resurrection, on the THIRD day, that is on the Sunday morning, upon meeting Mary, Jesus said, "Touch Me not, for I am not yet ascended to My Father." John 20:17.

What is the solution to this seeming difficulty? The solution lies in the fact that punctuation was not in vogue when Greek manuscripts of the New Testament were written. Indeed, the words and letters ran in a continuous line, without any break, inasmuch as very often a word was divided when it reached the end of the line, sometimes in the most awkward manner imaginable, its remaining syllables or letters being written on the next line following. This cramped and crowded condition of most of the existing early Greek manuscripts of the New Testament, minus any marks of punctuation, may be noted where these manuscripts, or photographic copies of the same (as in the "Encyclopædia Britannica"), are available and on view.

the Greek form as found in editions of the New Testament, but with our usual Roman lettering instead of the Greek, as follows: Kai (and) eipen (said) auto (to him) ho Iesous (Jesus) Amen (verily) lego (I say) soi (to thee) semeron (today) met' emou (with Me) ese (thou shalt be; or, shalt thou be) en to Paradeiso (in Paradise).

It will at once be seen that the comma can be properly placed after *semeron* (today), and the

N AN ultramodern laboratory a class of university students is intensely interested in the analysis of various forms of plant and animal life. These eager youth are determining the various chemicals which constitute the specimens they are studying. Each student is analyzing a different specimen and reporting the findings on what appears to be a rather complicated and elaborate chart; yet a careful examination of these charts reveals that they all can be expressed in one general, yet simple, formula: Water plus the dust of the ground equals all specimens.

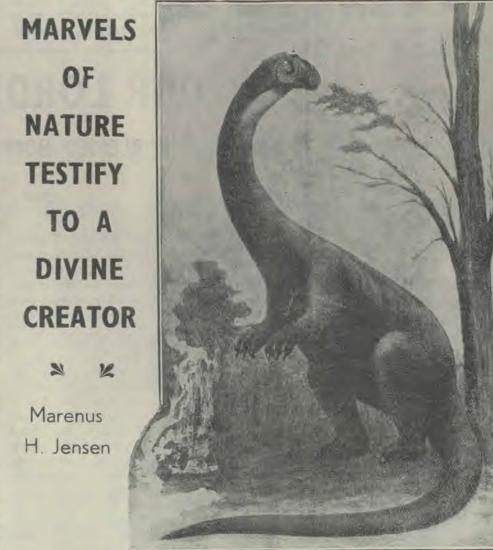
The formula is simple, yet when they endeavour to apply it in their laboratory, water plus dust equals mud every time.

Not so in the great laboratory of nature, for the first student finds that water plus dust equals a delicately tinted, sweetly perfumed flower. But try as he may, he can never get it to work that way in his laboratory experiment. It is alwavs mud. The second student finds that the same general formula, water plus dust, equals fruit with tempting aroma and delightful flavour. Still other students find that it produces beans, potatoes, melons, or nuts.

The marvel does not end here, for still others find that water and dust will produce living creatures, birds with their gorgeous colours, with power and skill to fly through the air and to sing sweet songs. Fishes of all colours, sizes and shapes also result from the proper compounding of these simple elements.

But perhaps the greatest surprise May 1944

passage then literally reads, "And said to him Jesus, Verily I say unto thee today, With me shalt thou be in Paradise." The text then conveys the meaning it is intended to convey, and is in full accordance with Bible teaching. This has been recognized by Rotheram in his translation of the text, in his "Emphasized Bible," as follows, "And He said unto him, Verily I say unto thee this day; with Me shalt thou be in Paradise." The meaning of the text, then, is obvious enough. The thief who had doubtless heard the preaching of Christ regarding His coming kingdom, asked that he be remembered at that time, that is, at the time of the establishing of Christ's kingdom. In other words, as the Expositor's Greek Testament notes in connection with the thief's request, "When Thou comest as King to earth again—may I be among those whom Thou shalt raise from the dead to share its joys."



to these students is the discovery that they are the result of the same process, for water plus dust equals man with his power to see, hear, speak, think, remember, and reason. Even greater wonders are unfolded as they analyze this last specimen in greater detail. They find that that marvellous organ, man's brain, is 20 per cent water and only 10 per cent dust. We with them are filled with awe and marvel at what this bit of dust and water is capable of doing.

Permit me to carry this thought one step further by citing one simple illustration. Jones meets Smith for the first time. Jones'

3

mind forms a picture of Smith, a picture which may remain in Jones' mind as long as he lives in spite of the fact that the water and dust which go to make up his brain are constantly changing. Jones' brain will not only snap a picture of Smith, but it will make a fairly accurate calculation of his age, weight, height, and honesty. It may even do a bit of checking on his I. Q. and personality.

Jones now meets Black and wishes to inform him of his new-found friend. He thereupon begins to force air past his vocal cords out through his lips. These air waves cause Black's cardrums and the bones of his inner car to vibrate. From these vibrations Black's mind forms a picture of Smith.

Now, Black has a friend in a distant city whom he would like to have meet Smith on his arrival in that city, so he takes a sheet of paper and with a pencil makes markings upon this sheet and sends it to his friend. This friend looks at the marks which have no resemblance of a man, but his mind transposes these markings into a picture, the same picture that is in the mind of both Black and Jones-a picture of Smith. He goes to the station. Hundreds of persons are milling about. Presently his eyes focus upon one man in the crowd. Yes, it is Smith. You say that it is marvellous. And, indeed, it is; yet it is only a simple illustration of what the Master Chemist can do with a bit of water and dust.

Can we believe in God? How can we do otherwise? Only a God can take so simple a formula -water and dust-and form the flowers, the trees, the fish, the animals, and man with his marvellous mind. Centuries ago the great lover of nature, David the psalmist, made this observation: "The heavens declare the glory of God; and the firmament showeth His handiwork. Day unto day uttereth speech, and night unto night showeth knowledge. There is no speech nor language, where their voice is not heard." Psalm 19:1-3.

Yes, all nature speaks of a God. We marvel that anyone could behold heaven with its suns,

4

moons, and worlds all hanging in open space, whirling at tremendous speed and infinite accuracy, and yet not see behind all a master mind, the mind of God.

It seems strange that anyone could conceive or believe that a universe could design and operate itself. One would be considered foolish indeed if he should contend that a "Flying Fortress" could design, construct, and operate itself. Certainly all would concede that this machine must be designed and operated by living intelligence. So must the universe. To believe in a God—a master designer, builder, creator—is the most logical, sane, and reasonable answer as to the origin of all we see about us. How else can we explain their existence to the satisfaction of even our own minds?

We speak of life, but what is it? We would like to know what causes that water and dust to move, to reason—yes, to live. All these deep mysteries and marvellous achievements bring us to but one conclusion. There is a Master Mind that has designed them all and is still controlling and guiding them. It is the mind of God. With the psalmist we would say, "The heavens declare the glory of God; and the firmament showeth His handiwork." Yes, we can, we must, believe in God.

OUR LORD'S RETURN

Leslie Hardinge

ACK in the days of Isaiah, the prophet found two common attitudes to the prophetic word among his hearers. He writes: "The vision of all is become unto you as the words of a book that is sealed, which men deliver to one that is learned, saying, Read this, I pray thee: and he saith, I cannot; for it is sealed: and the book is delivered to him that is not learned, saying, Read this, I pray thee: and he saith, I am not learned. Wherefore, the Lord said, Forasmuch as this people draw near Me with their mouth. and with their lips do honour Me, but have removed their heart far from Me, and their fear toward Me is taught by the precept of men: therefore, behold, I will proceed to do a marvellous work and a wonder: for the wisdom of their wise men shall perish, and the understanding of their prudent men shall be hid." Isaiah 29: 11-14.

Today we find precisely the same attitudes. The wise men declare superciliously that the Bible "is sealed." They speak of it as a book of mysteries not to be understood by the common man, while the ordinary man in the street thinks of the Bible as being a book somehow above his mental qualifications. "I am not learned," he declares. He feels he musi know Hebrew and Greek and the customs and lore of the ancient east before he can hope to understand.

Believe the Bible

Whichever of these fatal attitudes men may adopt toward the Word of God, the results are the same. The truths of salvation are neglected.

The Bible is to be our guide book. It is our charter of salvation. It has language so simple that a child may understand clearly. Its message is so clear that "the wayfaring men, though fools, shall not err therein." Isaiah 95:8. To those who believe, the Bible is "the power of God unto salvation."

Let us then accept the Bible as God's personal word to our hearts, sent to tell us how to attain eternal life in His kingdom.

Christ's Promise to Return

In the pages of Holy Writ there are certain truths which are often repeated. One of these which emerges, even from a cursory reading of the Holy Scriptures, is that our Lord plans to return to this earth.

We all believe that Jesus came to the earth nineteen centuries ago. We believe He was born of the virgin Mary; that He lived a perfect life as man's Example; that He demonstrated the principles which should actuate a man's life on earth; and that He suffered, died, and rose again, ascending finally to His Father's throne. The crowning truth of this wonderful series is that He is going to come back again.

Jesus Himself often bade His disciples look for His appearing. "And if I go and prepare a place for you, I will come again, and receive you unto Myself," He said. John 14:1-3. To this word of Christ's all the apostles and prophets add their testimony, as do the very angels of heaven. For, at the time of our Lord's ascension, as the disciples "looked steadfastly toward heaven as He went up, behold, two men stood by them in white apparel; which also said, Ye men of Galilce, why stand ye gazing up into heaven? this same Jesus, which is taken up from you into heaven, shall so come in like manner as ye have

MAY 1944

seen Him go into heaven." Acts 1:10, 11.

"This same Jesus!" What thrilling words! The same compassionate Saviour who fed the hungry, and healed the sick; the same sympathetic Friend who wept out of understanding at Lazarus' tomb; the same loving Elder Brother who gave His life that we might live—He will come again.

St. Paul clarioned: "So Christ was once offered to bear the sins of many; and unto them that look for Him shall He appear the second time without sin unto salvation." Hebrews 9:28. And he adds, "For this we say unto you by the word of the Lord.... The Lord Himself shall descend from heaven with a shout, with the voice of the archangel, and with the trump of God." Thessalonians 4:15, 16.

All the Old Testament prophets have longed for this glorious appearing of our Lord and Saviour Jesus Christ. Enoch said nearly six thousand years ago: "The Lord cometh with ten thousands of His saints." Jude 14. So also have said all the prophets.

Some Deny the Advent

While it is so clear in the Word of God, the Bible, that Jesus is to return, many disbelieve this fundamental doctrine of the inspired record. God knew that there would be such a class in these

days. Through the apostle Peter He declared: "There shall come in the last days scoffers, walking after their own lusts, and saying, Where is the promise of His coming? for since the fathers fell asleep, all things continue as they were from the beginning of the creation." 2 Peter 3:3, 4. So when you hear someone deny the second advent, or decry it, know that the prophets have warned against this class, and have placed their activities in "the last days."

The Command to Reap

One day soon, all the preliminaries to the actual return of Christ will have been completed. "Of that day and hour knoweth no man, no, not the angels of heaven, but My Father only," Jesus stated. Matthew 24:36. And then from the throne of Omnipotence a shining messenger will bear the final direction to the Son of God. The harvest of man's sowing is to be reaped. "Thrust in Thy sharp sickle, and gather the clusters of the vine of the earth; for her grapes are fully ripe." Revelation 14:18. "The harvest is the end of the world." Matthew 13:39. From heights afar, He who makes the heaven His throne, will set forth to gather His ransomed to Himself.

Picture the mighty Conqueror. No more is He the meek and lowly Jesus. No more is He despised and spat upon. No more are His God." robes those of a servant. No more is His face marred above the sons of men. Now He comes "in the glory of His Father with His angels." Matthew 16:27. No more to be a Servant of servants, but on "His yesture and on His thigh a name written, KING OF KINGS, AND LORD OF LORDS." Revelation 19:16. No more does He come, meek and "lowly, and riding upon an ass, and upon a colt the foal of an ass." Now, John declares, He returns in unsurpassed splendour. Revelation 19:11-14.

A Song of Triumph

Behind this majestic Being, clothed in the panoply of eternity, come the angel hosts, cherubim and seraphim leading the celestial choirs. There reverberates around the heavens pæan upon pæan of apocalyptic praise. "Alleluia; Salvation, and glory, and honour, and power, unto the Lord our God." (Read Revelation 19: 1-7.)

This glorious advent of our Lord will be visible to all, for "every eye shall see Him." Revelation 1:7. It will be no mystical secret coming. We are not to believe any such suggestion. (Matthew 24:23, 26.) As the lightning is visible to all, so will be the advent.

The Lord Is Recognized

As the startled inhabitants of this planet see this great spectacle, the word will be carried around the globe, "Christ is coming! Christ is coming!" By their lives all mankind will be separated into one of two classes. One class has longed for the advent. They will cry out in ecstasy, "Lo, this is our God; we have waited for Him, and He will save us: ... we will be glad and rejoice in His salvation." Isaiah 25:9. The other class, indifferent or in open rebellion against the Man of Calvary.

will be sore afraid. Then will "the kings of the earth, ... and the rich men, and the chief captains" hide themselves "in the dens and in the rocks of the mountains"; and say to the mountains and rocks, "Fall on us, and hide us from the face of Him that sitteth on the throne, and from the wrath of the Lamb: for the great day of His wrath is come; and who shall be able to stand?" Revelation 6:15-17.

As Jesus approaches the earth His voice will bid the sleeping saints arise. And from their graves the ransomed of the Lord will come forth (I Corinthians 15:51; I Thessalonians 4:16-18; II Timothy 4:6-8) to join those of whom Paul says, "We which are alive ..., shall be caught up together with them ... to meet the Lord in the air."

This day long foretold is upon us. It hasteth greatly. Let us now prepare to meet Him. "Even so, come, Lord Jesus." Revelation 22:20.

"THOU GOD SEEST ME"

A POOR Egyptian woman, friendless and lonely, rested beside a well in the wilderness of Shur. She was seeking respite from the cruel treatment of her mistress. Sarah, the wife of Abraham.

As Hagar sat by the fountain, an angel of the Lord, in human form, appeared to her and admonished her to return and submit to the authority of her mistress. But, mingled with reproof, the angel spoke words of comfort, and gave her the assurance that God took notice of her affliction. "And she called the name of the Lord that spake unto her, Thou God seest me." Genesis 16:13. The well be-came known as Beerlahairoi, that is, "The well of Him that liveth and seeth me," Verse 14. margin_

Walter F. Specht

"Thou God seest me"-what a restraint from evil and a stimulus to good is found in the thought! God has an intimate knowledge of, and a personal interest in, every one of His children. He who tells the number of the stars and calls them all by their names, knows and cares about you and me. Psalm 147:4, "Are not two sparrows sold for a farthing? and one of them shall not fall on the ground without your Father. But the very hairs of your head are all numbered. Fear ve not therefore, ye are of more value than many sparrows." Matthew 10:29-31.

"His eye is on the sparrow.

And I know He watches me." The sense of God's presence is an effectual shield against temptation, and is an incentive to purity and truth. "All things are naked and opened unto the eyes of Him with whom we have to do." Hebrews 4:13. The least item of man's conduct does not escape the scrutinizing eye of God. The depths of every heart and life are open to divine inspection. "The eyes of the Lord are in every place, beholding the evil and the good." Proverbs 15:3. He is the eternal guardian of right and the avenger of wrong.

Amid the corruptions of Egypt, Joseph found a safe shield against the allurements of temptation in the sense of God's presence. "How then can I do this great wickedness, and sin against God?" was his answer to his tempter. Genesis 39:9. Joseph was fully aware that "the ways of man are before the eyes of the Lord, and

He pondereth all his goings." Proverbs 5:21.

To every man there is coming a day of reckoning. "Every one of us shall give account of himself to God." Romans 14:12. The thought of personal accountability to God and of the impending judgment should ever loom on the horizon of a Christian's thoughts. God sees me, and I must answer for my own life.

God is not an exacting overseer. He has a sympathetic understanding of every soul. The sense of His presence banishes the , fear of men. The taunts of men cannot affect the man who conscientiously lives to please God.

"Earth's scoffs and scorn well pleased I'll bear, Nor mourn though underfoot I'm trod, If day by day I may but share Thine approbation, O my God!"

The greatness and majesty of our Creator do not forbid His interesting Himself in the weakest of His creatures. God is infinite. His infinity makes possible a relationship between Him and each of His children as distinct and full as though there were only one soul for whom He had to care. "How precious also are Thy thoughts unto me, O God! how great is the sum of them! If I should count them, they are more in number than the sand: when I awake, I am still with Thee." Psalm 139:17, 18.

- "I know not where His islands lift Their fronded palms in air:
- I only know I cannot drift Beyond His love and care."

God sees the past, the present, and the future as one eternal now. He sees the end from the beginning. Hence, He alone can safely guide and plan our lives. He says to each of us, "I will instruct thee and teach thee in the way which thou shalt go: I will guide thee with Mine eye." Psalm 32:8. We are erring and shortsighted. We would do well to trust the hand of Him who never blunders.

Prayer should help us to see things from God's viewpoint. May 1944



When our prayers are not answered in the way we expect, we may still hold fast our faith. God sees and knows what is best. "Your Father knoweth what things ye have need of, before ye ask Him." Matthew 6:8. No prayer that comes from a sincere heart is unheard. "The eyes of the Lord are upon the righteous, and His ears are open unto their cry." Psalm 34:15.

- "O Thou to whose all searching sight
- The darkness shineth as the light;
- Search, prove my heart, it yearns for Thee;
- O burst these bonds, and set it free!
- "If in this darksome wild I stray. Be Thou my light, be Thou my way;
- No foes, no violence I fear.
- No fraud, while Thou, my God, art near."

"COME IN"

Adlai A. Esteb

"Come in, thou blessed of the Lord; wherefore standest thou without? for I have prepared the house." Genesis 24:31.

W HAT a cordial greeting to fall upon the ears of a weary traveller! But far more condescending and wonderful is the blessed call of God at this time! And ten thousand times more abundant than Laban's little store is the infinite plenitude of Christ's provisions.

"Come in." Have we come fully into the rich spiritual experience of righteousness by faith? Let us possess all our possessions in Christ.

"Thou blessed of the Lord; wherefore standest thou without?" Others may turn back, but why do we hestitate? Why have we lingered without so long? Christ has prepared the house. Come in! Come in to the wonderful provisions of His providence.

There are also heavenly mansions which Christ has gone to prepare for us. Are we prepared to live in them? When Jesus returns and says, "Come in," shall we enter them? That same Jesus says now, "Enter into thy closet, and when thou hast shut thy door, pray." How about this secret place of prayer? Have we learned to enter in now into the secret of His presence? Have we experienced the unspeakable joys of secret fellowship with Jesus? Come in, thou blessed of the Lord; why standest thou without this beautiful gate of prayer? It is the gate of power and blessing and service.

A thousand verses of neglected Scripture cry out: Come in; search me; come in and explore my hidden treasures; I am prepared for you, thou blessed of the Lord. Come in! Come in!



|| There is a serious dearth of trained geographers to meet the demands of global military activity.

Atabrin, the wartime substitute for quinine, was tested during Army field manœuvres recently. Army doctors reported good results.

The human body is thrifty, using iron over and over again. When a cell breaks down, about 85 per cent of the iron is salvaged and returned to bone marrow.

7 Doctors have developed a sulfa chewing gum which promises to be an effective means of getting sulfa drugs in direct contact with throats and tonsils infected by streptococcus germs.

Infra-red lights are used for speedy drying of painted surfaces in industrial plants. In one factory newly painted tanks are dried in four minutes by driving them through a tunnel lined with thousands of these lamps.

"England has mobilized 90 per cent of its single women of draft age either in military service or in vital civilian services, such as the Land Army or munitions plants. In addition, 750,000 men over sixty-five years of age and women over sixty have gone to work.

¶ Scientists have discovered that the harmful effects resulting from the use of the sulfa drugs can be eliminated to a large degree by supplying vitamins—notably K and C. The use of these drugs apparently inhibits the manufacture of these vitamins within the body, making it necessary to supply the deficiency.

¶ Master Sergeant Al Schuman, on duty in Honolulu, is thought to be the only enlisted soldier in the U. S. Army who has been granted official permission by the War Department to salute with his left hand. Because of an injury to his right arm received during World War I, Sergeant Schuman received the special dispensation when he applied for reenlistment. ¶ In South America there is a species of grasshopper that is four inches long and has a wing-spread of almost a foot.

¶ Sir Isaac Newton's library of 858 volumes recently changed hands in London. To bibliophiles the most important items in the collection are first and second editions of Newton's own works corrected in his handwriting.

¶ Easter fell in 1943 on April 25, the latest possible date, for the first time since 1836, and will not do so again until the year 2038. The date is determined by rather complicated computations involving astronomy and both Jewish and Catholic traditions.

A new plastic has been developed by the Goodyear Tire and Rubber Company, which joins metals in a stronger union than does riveting or welding. The cement is applied and allowed to set under heat and pressure for fifteen minutes. It is also useful in joining metal and wood. The composition of the new substance is a carefully guarded secret.

[] On exhibition in New York is the oldest telephone in the world, andstrange as it may seem-Alexander Graham Bell had nothing whatever to do with it. "The subscriber was the ancient king of the Peruvian Chimas, whom the Incas later displaced, and presumably the telephone number was Chan Chan 1, for it was first set up in his palace at Chan Chan about the year 943. It consists of two gourds shaped almost exactly like the modern tele-phone receiver, with skin bound taut over the closed ends, connected with a hundred and fifty feet of string. In the original installation the string was stretched tightly be-tween the king's bedroom and some other part of the palace. Moving either receiver 'called' the other with a growling noise, and when answered, speech would travel over the 'wire.' Incidentally, though it is a thousand years old, the gadget still works."

I Though more expensive, wooden springs are proving almost as satisfactory as the regulation metal ones which can no longer be manufactured.

The earliest record of the use of the organ in religious services is the mention made by Julianus, a Spanish bishop, of its use in Spanish churches about 450 A.D.

A Russian archeologist, digging into the ice of the Altai Mountains of Siberia, came upon a stable full of saddled horses which had been preserved for centuries under many feet of ice.

The earliest known calculating device of any importance is the abacus, the invention of which is claimed by the Chinese, and which may even now be seen in use by many Chinese laundrymen.

¶ Two British inventors have devised an armoured vehicle which is equally at home in water, swamps, or on solid ground, and could be used to transport Commando units across water and move straight on inland.

[In the four years since Pan-American Airways inaugurated its transatlantic clipper service, it has carried 44,000 passengers, 2,500,000 pounds of mail, and 3,000,000 pounds of express. In 1,400 crossings, totalling 6,862,000 miles, there has been only one major accident.

[] Boy Scouts assisting in a salvage campaign in Woodbridge, Suffolk, England, recently turned up a package of old correspondence which proved to be secret intelligence of Napoleon's Russian campaign, describing the state of affairs on the Continent in 1811 and 1812.

Using electric stimulation, Dr. Henry Cadan of Brooklyn reports that he has discovered a new treatment for colour blindness. The two-volt, one-milliampere current, used three times a week, stimulates eye muscles and nerves, effecting lasting improvement.