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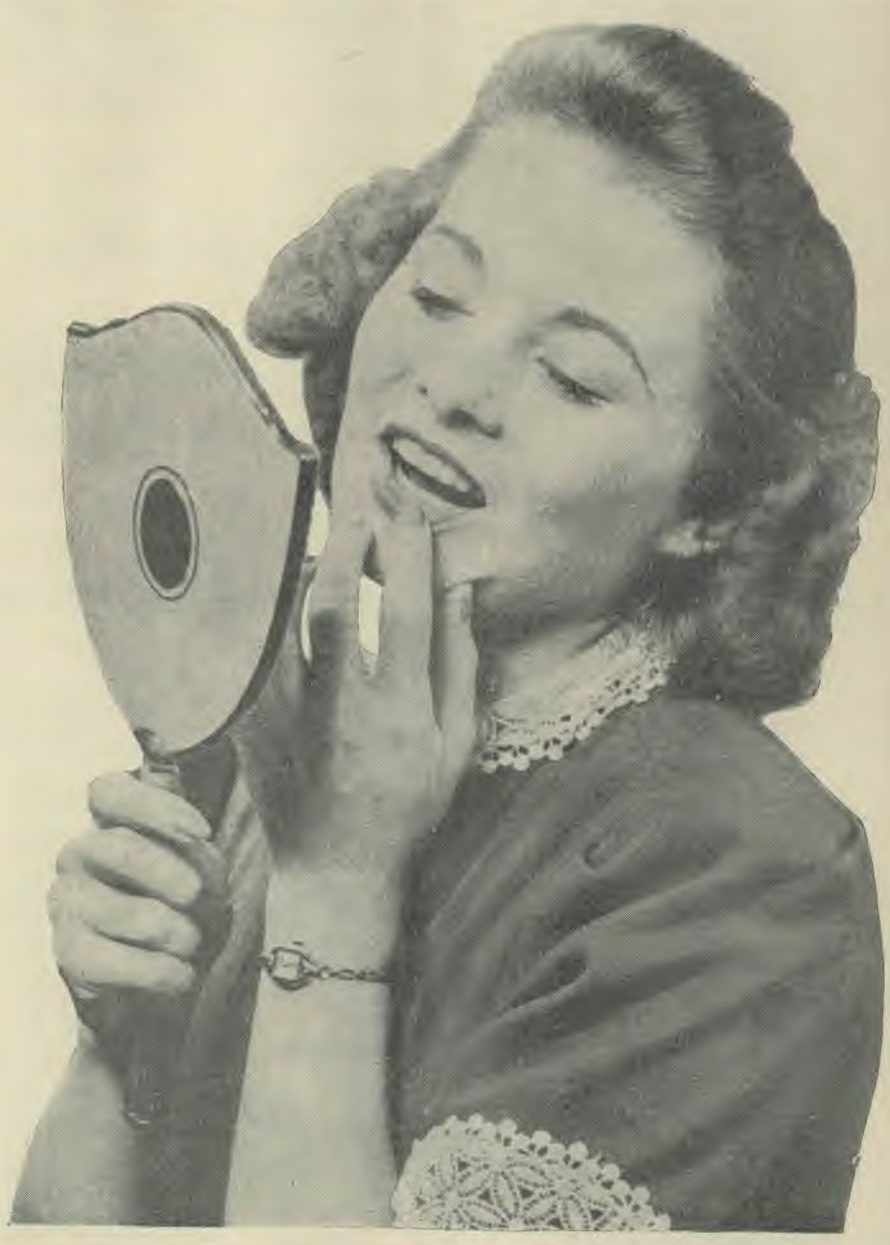
IN THIS ISSUE . .



What does the mirror reveal?

EDITORIALS

HEALTH AND CO-EDUCATION

W. N. P. S.

Photo shows—Dr. Andrew Topping, who takes over the charge of Europe's health for the post-war years.

CO-EDUCATION has been tried in various countries, and is still under trial. Its success has been "more or less," according to whose findings or opinion we accept.

The Soviet Union, however, is re-establishing separate schools for boys and girls. This is something of which we should take notice; for Russia is a great country where great "experiments" have been carried out. (There again Russia was "good" or "bad," according as the politicians would have us believe.)

According to Prof. Yevgeni Medinski, D.Sc., as stated in *Soviet Union News*, the "underlying conceptions towards which progressive Russian pedagogical thought has been striving since the eleventh century are: 1. Humanism, profound respect and love for man, faith in man's great creative energy.

"2. Democracy.

"3. Patriotism, great love of country, education of and for the people.

"4. The development of practical activity in the child, love of work.

"5. The recognition of the great value of science and learning."

We would like to see "love of God" heading this list; as we do not think the others, in their truest sense, are possible without it. However, we think the Soviet leaders have already discovered that.

Russia also has the distinction of having opened the first non-classical school in the world. This was opened by Peter the Great in Moscow in 1699. This school had 500 students, and from it graduated teachers of mathematics, engineers, sailors, and other specialists. We need schools of that type in India. We have too much "book learning" in India; not enough practical work.

Russia, then, can claim our attention. In regard to co-education, it was generally accepted that it had reached its fullest development in Russia, and was responsible for the equality that exists there between men and women.

However, data submitted to the federal Ministry of Education, bring out the striking fact that there is a very distinct difference between boys and girls of the "teen age."

Boys between the ages of ten and fourteen "are accumulating strength, during which period their physical development slows down."

Girls, on the other hand, show a rapid physical development during these ages, and are ahead of the boys in height and weight. "Between the ages of fourteen and seventeen it is the other way around,—boys develop more quickly than girls."

This unequal development of boys and girls is given as the reason for the unequal understanding of lessons, and thus boys and girls of the same age do not make the same progress at school.

This is not the only point, however. It is considered that there is also the necessity for a "different educational approach to boys and girls in various phases of their development—different presentation of the material—different work to be assigned—in fact, different methods of teaching and working. This differentiation cannot be attained if the boys and girls are in the same class."

That is why separate education of boys and girls has been reintroduced in Russia. It is claimed that some months of experience with the new method has given positive results.

It is not to be thought that the sexes are to be "isolated." The Soviet educators prevent this tendency by wise and extensive organization of activities outside of school hours, so that boys and girls may be brought up properly, "in mutual respect and equality."

The Soviet authorities consider that "the results will not be slow in showing themselves in the rate of progress of the pupils, in discipline and in the strengthening of the family."

It looks as though the Soviet leaders "have something" here. Let our pedagogues take note.

Health Through History

HENRY FORD, the great motor manufacturer, is credited with saying that "history is bunk!" We presume that Mr. Ford means that history is "*nonsense*," and perhaps it is, if it does not teach us any lessons. However, we wonder if history, as sometimes used by the nations, is not a bit more sinister than just "bunk."

If history were always a scientific record of facts, perhaps we could feel more kindly toward it, but in most cases history is distorted and deformed in its recording, and in turn it perverts and misrepresents.

We can understand the patriotic and national spirit that seeks to instil love of home and country; but very often history has been written and taught to extol and glorify one nation or one set of people to the detriment and contempt of another. This may not be appreciated by people who have always lived "at home"; but those who have lived and studied in other countries will readily admit that such is the case. In fact, the more people come to translate and read each other's version of a particular event, the more they are likely to develop a hatred for each other. This very fact is often used to develop a "national front," and that soon brings wars when the right moment is reached.

When "history" is merely a succession of wars, of "nation rising against nation"; when the "great men" of this world are represented as the Alexanders (misnamed Great), the Napoleons, the Charlemagnes, we wonder if it would not be better to have done with the old-style history and begin to teach a new kind, wherein the "great" men are the men or women, irrespective of nationality or colour, who have done something for the good of the

human race—constructive rather than destructive.

Instead of being taught by history to expect the worst of other people, we might learn to expect something good of them.

Indians have sometimes been pitied that they have left so little of historical record. Perhaps they have been wiser than they thought.

We understand that plans for wider educational facilities for the "masses" are proposed—and not before they are needed. We hope, however, that the "communal" and "nationalistic" aspect of history will not be too much in evidence. Let us have a new kind of history-teaching, something that will bring the peoples of the world together, rather than drive them apart. The fact is, when we get to know what are miscalled the "common people" of any country, we are surprised to discover what decent people they often are. They don't want to kill us any more than we want to kill them.

Let us hope that when the present fomenters of world misery have received their quietus that nations and peoples will learn to get along together; that is, if the politicians and armament makers will allow it.

BEAUTY SLEEP

THE VALUE OF THE HERB PILLOW

C. HAMILTON

HERB pillows help to promote sound sleep and are therefore recommended to sufferers from sleeplessness.

Nature is very bountiful in her supply of odoriferous herbs, which give off a delightful brain-and-nerve-soothing fragrance. In addition to lavender, with its clean, refreshing perfume, there is the rosemary herb, lemon verbena, and thyme, to mention but a few.

Our great-grandmothers were firm believers in the virtues of these herbs, and their aroma was esteemed as in no small degree contributing to good health, and they always saw that the linen chest or cupboard had its supply of such herbs as were available to them. If this practice were observed nowadays as scrupulously as it was by our ancestors, much ill-health might be avoided.

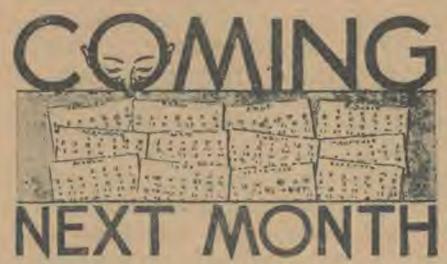
To sleep with your head on a herb pillow, or in bed linen that has been impregnated with the sweetly-refreshing odour of, for instance, the lemon verbena, is a delightful experience. As you close your eyes, the herbal exhalations will pleasantly remind you of blue skies, golden hayfields, and the glamour of a bright summer's day. Your slumbers will be deep and refreshing, and in the morning you will arise feeling bright of brain and physically energized.

The medical profession is beginning to show an interest in the claims of the herb pillow, and in some countries it is possible to buy herb pillows. As a substitute, however, you can procure some fragrant herbs from any herbalist. You should make sure that they are freshly gathered and dried, otherwise the results will not be so satisfactory. For a few rupees you can get a supply—already mixed—of these herbs, and if you are prepared to go to a little greater expense, you can obtain some delightful herb combinations.

Rub these herbs well through the hands and mix together; then add some hop buds. Now make little bags inside a pillow-case and fill with the mixture, afterward turning the pillow-case right side out.

Fragrant herbs can also be placed between the linen in the linen chest, and these will soon impart their perfume to the various articles. Some of these herbs are put up in powder form, and when placed in little organdie bags between the linen, will soon prove to be worth their small cost by reason of their health and sleep-bestowing virtues.

In the rush and turmoil of modern life, the use of fragrant herbs, as indicated above, will be found one of the most natural, inexpensive, and surest means of courting Nature's sweet restorer and thus conserving physical well-being.



WHAT IS RINGWORM?

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VARICOSE VEINS

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CHILDHOOD ACCIDENTS

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ONION KILLS BACTERIA

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HEALTH AND SCIENCE

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THE DOCTOR SAYS

* * *

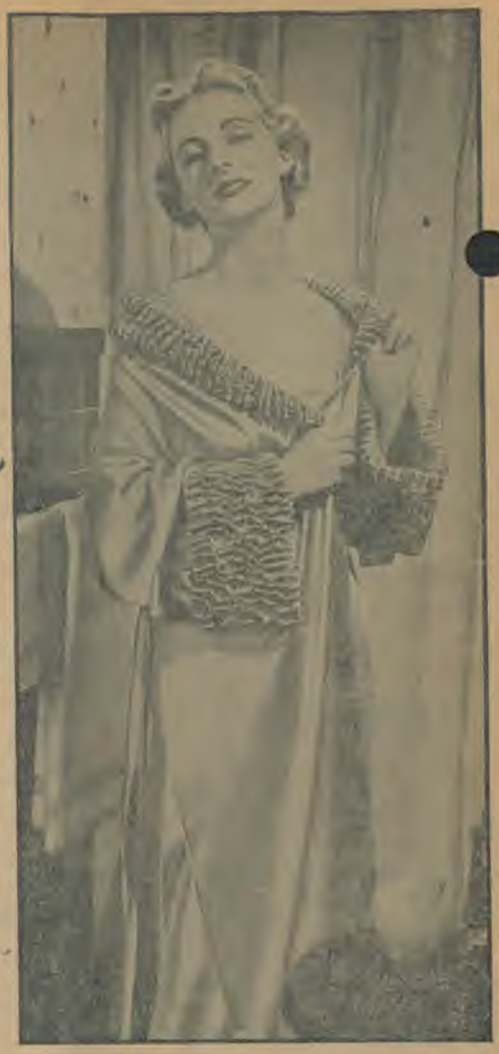
ETC. ETC.

TEETH THAT DON'T DECAY

A REPORT ON CERTAIN SCIENTIFIC FINDINGS THAT MAY POINT THE WAY TO FREEDOM FROM DENTAL DECAY

W. W. Bauer, M.D.

Take care of your teeth.



WHAT makes teeth decay? That question, uppermost in the minds of millions facing a session with the dentist, has been equally in the thoughts of students of dental decay and its possible causes. Decaying teeth are the most prevalent disease which affects human beings, and fossil remains indicate that probably this has always been so despite primitive man's supposedly "superior" diet and "natural" life!

There have been many theories about dental decay, but thus far none have explained everything. A medical theory, like a detective story solution, must leave no loose ends. Every theory of dental disease—acid mouth, deficient diet, bacterial infection, body chemistry—has had much in its favour and just enough against it to discredit it as the full and complete explanation. Acid mouth, once the bogeyman, is now known to be normal within limitations. Persons with dirty mouths have tooth decay, but others with equally unclean oral cavities do not. Bacteria are not constantly present, or cannot be proved to constitute cause rather than effect.

Now a new possibility appears on the horizon. "Mottled enamel" teeth, unsightly as they are, have the advantage of being resistant to decay. Mottling of dental enamel is a discoloration, uneven in distribution, as its name suggests. There may be yellowish opaque spots shading through brown to black, or, on the other hand, through lighter yellow to chalky-looking white. Bands may appear instead of spots. Microscopically this is due to the deposit of pigment called "brownin" between the structural rods of which tooth enamel is composed, with a corresponding lack of cementing substance in these spaces. The enamel appears glazed. It is brittle, even while it resists decay.

Teeth with mottled enamel resist decay. But they have another disadvantage besides unpleasant appearance; they are hard to repair when they do decay, because the enamel is brittle. So the question has been raised by David Bernard Ast of the New York State Department of Health, whether there is not some way in which the characteristics of mottled enamel teeth can be imparted in just sufficient amounts to discourage decay, but without mottling the enamel. In a survey of the literature, Ast reviews numerous studies of mottled enamel since it was first observed in the United States during examinations of the teeth of Italian immigrants, in 1901. As early as 1892 and as late as 1940, observers in many parts of the world—Italy, Japan, Argentina, India, England—noted a coincidence; in certain areas where the water contained an unusual amount of the chemical element fluorine, dental decay was less prevalent than elsewhere. No suspicion existed, at the time of the earliest of these scattered observations, that fluorine had anything to do with mottling of the enamel. In the meantime dentists in various localities were observing the occurrence of mottled enamel.

F. S. McKay, in 1927, is credited with first associating the occurrence of mottling of the tooth enamel with unusually large amounts of fluorine in the drinking water. This was based on observations in the vicinity of Naples, where he noted that those who showed mottling got their drinking water from wells sunk in the flow of lava from ancient eruptions. In one community where a change was made in the water supply, no new cases of fluorosis developed thereafter. Previous to this he had made observations in Oakley, Idaho, U. S. A., where in 1925 he noted 100 per cent presence of fluorosis; but when he succeeded in having a change made in the water supply to a source from which the users showed no mottling, no new cases developed. Then in 1933 another survey in Oakley showed that the permanent teeth of children born there after the change in water sources, gave no evidence of mottling. The water supply which was associated with mottling showed 6 parts per million on chemical analysis; the new source not associated with mottled teeth contained but one twelfth as much—0.5 per million.

All these scattered observations, which now seem obviously to belong together in a logical sequence, were not so plainly significant at the time to the separate observers. But correlation came in 1931, when two sets of studies in the United States and one in North Africa showed fluorine content of waters in areas where mottling of dental enamel was endemic—routinely present—to be from 2 parts per million to as high as 13.7. Studies made on white rats also confirmed the relationship of fluorine in excess in drinking water and the occurrence of mottling. T. H. Dean in 1938 made a series of statistical studies which demonstrated the following:

(a) That when all other factors are equalized as much as possible (sunshine, climate, latitude, economics, age, colour, sex, and race) and when examinations are made as nearly as possible by the same examiners, children are shown to suffer *less* from tooth decay in those localities where there is an *excess* of fluorine in the drinking water.

(b) This immunity from decay seemed to affect the "baby" as well as the permanent teeth.

(c) Severity of tooth decay was *lower* where there was *frequent* mottling of the enamel. Dean suggested that treatment of public water supplies to furnish a minimum of one part per million of fluorine might be desirable.

A year later Dean reported another series of studies on four cities in Illinois. Galesburg and Monmouth, with water supplies containing about 1.8 parts per million of fluorine, showed upon survey only about 200 decayed teeth per 100 children. Macomb and Quincy, on the other hand, where the water contained only 0.2 parts per million, had children whose teeth decayed at the rate of 401 per 100 children in Macomb and 633 in Quincy. Biting teeth were especially

free from decay in areas where fluorosis existed. In 1941 Dean and co-workers further reported observations from the town of Bauxite, Arkansas, whose water supply had come from deep wells and had a fluorine content of about 14 parts per million, but the source had been changed about twelve years before to the Saline River, whose water contained no fluorine.

Obviously, then, children under the age of twelve had received no fluorine in the drinking water and might be expected to show no mottling of dental enamel and a high rate of dental decay. They did just that. On the other hand, children born a few years before the change in water supply might be expected to show little mottling and less decay; actually they showed no mottling and less decay. One hundred per cent of the children who had used the deep-well water for many years showed mottled enamel. Those who had used the river water for only twelve years had less decay than those of the same age in a near-by community (Benton) who had always used the fluorine-free Saline River water.

After such clinchers there could be no further doubt of the relationship between mottled enamel and fluorine in the water supply, between mottling and resistance to decay, and between fluorine and resistance to dental decay. Similar findings were reported by Dean and co-workers in eight other Illinois cities; these findings reinforced what has already been briefed here.

Another study by Dean and others was based on a reversed situation. Garrettsville, Ohio, in 1939 put into service a well which contained 1.7 parts per million of fluorine; mixing this water with other well water which had no fluorine, gave a resultant water with about 0.7 parts per million. Immediate results were an unexpected increase, rather than the anticipated decrease, in the presence of typical mouth germs, lactobacillus acidophilus, associated with tooth decay and considered by some observers—not all —to be its cause. In Galesburg and Quincy similar bacteriological studies had shown far higher counts in Quincy (nonfluoride water supply) than Galesburg (fluorides in water), thus demonstrating a parallelism between the presence of the organism and tooth decay. That this was not shown likewise in Garrettsville is attributed by the authors to the brief exposure of the children to the new fluorine-containing water. Time must elapse before Garrettsville can give any conclusive evidence.

Studies on rats, already briefly referred to, have confirmed observations based on human beings, and shown in addition that putting fluorine in the diet apparently will not do so well as putting it in the drinking water. Neither will injecting it; this seems to indicate that it may function locally in the mouth rather than systemically.

Fluorine is a chemical element of the halogen series, of which the others are chlorine, bromine, iodine, all popularly better known than fluorine, except to those who use rat poisons, which are based on fluorine, and the industrial users of the compounds of this element. Fluorine compounds are active poisons, except in minute dosages; yet fluorine is a constituent of the body, mainly in the harder tissues, that is, bones and teeth. Fluoride poisoning involves hardening of the bones and tendons, bony growths, and injury to the kidneys, through which the fluorine is excreted. Some foods also contain considerable amounts of fluorine. However, except in certain groups of industrial workers, the main evidence of excessive fluorosis in human beings is the typical mottling of the enamel of the teeth. Fluorine, closely allied chemically to iodine, seems also to have similar physiological action. Mottling of dental enamel has been found associated with simple goitre, and the use of fluorine in treatment of toxic goitre has been advocated. Evidence on these points, however, is not conclusive, and fluorine therapy has not found a place in the treatment of goitre as yet.

On the basis of all these findings, which Ast reviews in Public Health Reports for June 4, 1943 (on which this article is based), he recommends a study project involving the addition of fluorine in the form of sodium fluoride to water supplies. He suggests a dose of 0.8 parts per million of fluorine (toxicity to man demonstrated in amounts of 1.0 p.p.m. or more), or 14.7 pounds of sodium fluoride to one million gallons of water. This could be done, he points out, through the use of several types of water-plant equipment now in use for chlorinating water supplies or adding alum for settling purposes. He recommends adding it after settling procedures have been carried out, to avoid having the fluorine removed in the sedimentation process. His purposes, as expressed in his conclusions, are to study the effect on dental decay under the influence of a water supply which contains enough fluorine to add resistance (if experimental observations indicate the trend correctly) without producing mottling.

It is quite certainly true that millions of people with decayed teeth let them go without proper care until they are lost. By no means are all these people poor. It is hardly conceivable that under the impact of health education, to say nothing of the advertising of products such as mouth washes, dentifrices, and the like, people could remain unconscious of their dental needs. They just do not take care of their teeth.

As Ast points out, such a study must be made with adequate comparison (control) studies. There must be two communities as near alike as can be found, both with fluorine-free water supplies. Teeth of children in both communities must be examined. To the water supply of one community the fluorine must be added over a sufficiently long term of years, and studies of children's teeth carried out through those same years, to clinch the question.

Mottled teeth do not decay—but who wants mottled teeth? Here may be, if not the solution, at least the pointer toward a solution of the problem of dental decay.

PREVENTION OF ANOREXIA

ANOREXIA IS SIMPLY THE PRACTICE OF REFUSING TO EAT. It is far easier to avoid the development of anorexia than to correct it after it has been established. It is puzzling to parents when a baby goes on a hunger strike and upsets the whole household at every meal. Thoughtless handling of the dilemma usually aggravates the problem.

Anorexia is often found in apparently almost ideal situations. Otherwise well-cared-for babies in favourable environments stubbornly refuse to eat. The fault in the situation lies in the lack of proper mealtime psychology on the part of the parents, or other attendants of the child.

One common cause is over-training the child at the table or over-concern on the part of the baby's mother or nurse. The more those present show distress or anxiety, the greater the young tyrant considers his success to be. If he has succeeded in making a commotion he gets a feeling of gratification from the abnormal amount of attention and show of affection he receives.

Whether breast-fed or bottle-fed, the baby who idles and loafs through his mealtime should have the food removed after a reasonable time has been allowed. Nature will make amends at the next meal and a good start has been made toward good eating habits. This is more difficult for the mother of a bottle-fed baby, for she can see the last of the milk formula in the bottle and thinks her baby will not gain unless all of his formula is taken at each meal. Babies vary in the amounts they eat just as do adults. Over-concern at this time or any evidence of

anxiety is not lost even on a very young baby. He soon learns that refusal to eat is a most effective means of securing an unusual amount of attention.

An interesting time for both mother and child comes with the first feedings of solid food. The child more frequently than not will spit out the new food, not because he does not like it, but because it has a strange "feel" in his mouth and he has not yet learned to eat and swallow it. Patience, poise, and confident unconcern are necessary.

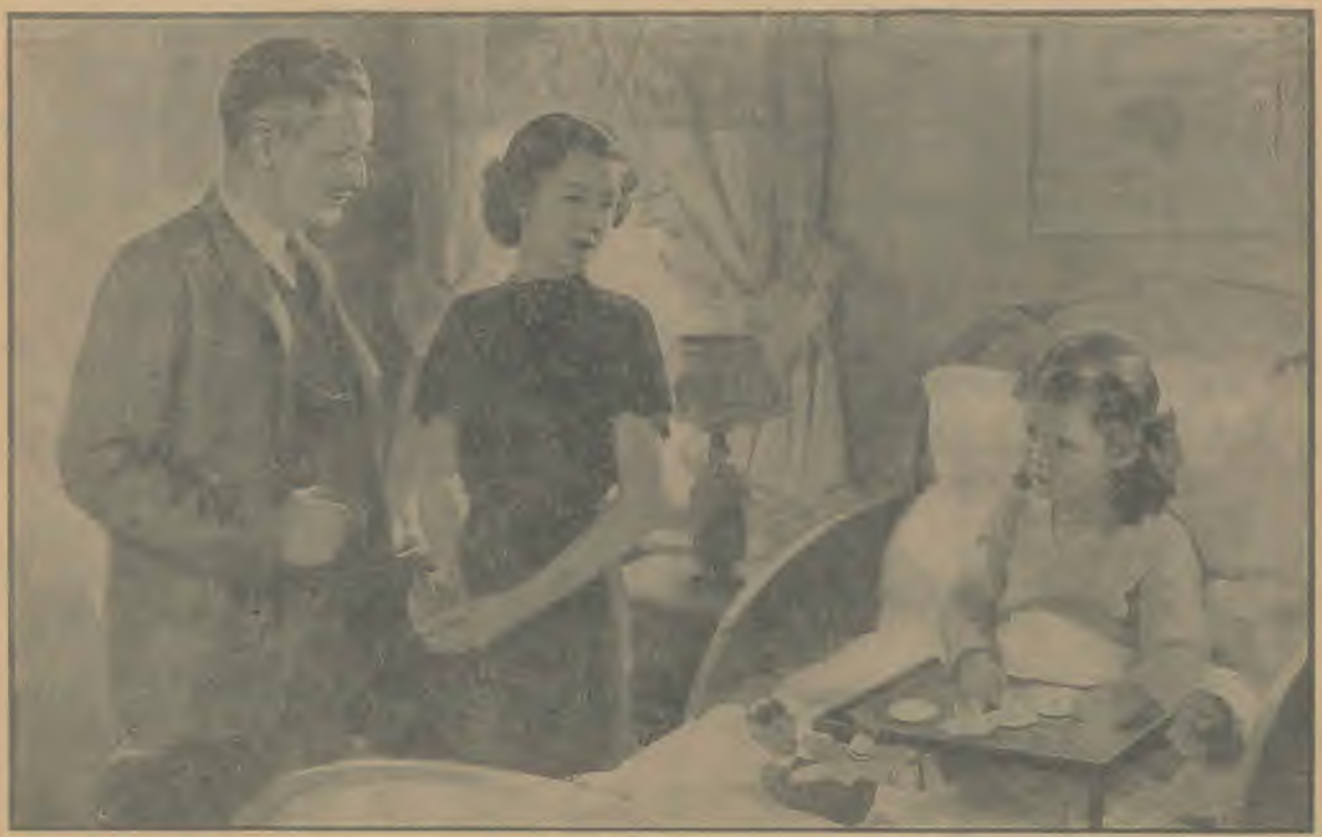
Secure his interest in his food for some reason. A baby may have the privilege of smearing spinach in his hair, but he is making progress in the business of learning to feed himself and it is more interesting than being fed. A toddler may help prepare his food.

Children who persistently dawdle at mealtime, may be corrected by reducing the quantity of food offered. Sometimes it is necessary to reduce the quantity of milk, perhaps for as long as a couple of weeks. Neither a baby nor a child is going to starve himself. If he consumes only a portion of the reduced quantity, the meal should be ended at the proper time, the uneaten food removed, and no food given him until the next regular meal.

To bribe a child to drink his milk or eat his vegetables is most unwise. He is not conferring a favour on you when he eats his food, so do not give him the idea he is. It should not concern you if he does not eat what you think he should, or at least your child should never know it if you are concerned. What adult wants to eat because it is "good for him," or because someone else thinks he should eat a certain amount! Your child knows better than you do when he should stop eating. Give him some chance to use his developing individuality.

It is sometimes difficult to apply persistently some of the suggestions we have made, and it is particularly difficult to make a "change of front" from an over-anxious, coaxing mother to an indifferent mother. To keep pleasant and patient when one is irritated and worried is not easy. To appear unconcerned when you think your child is going to starve himself to death (he won't) is anything but easy. But patience, poise, and calm cheerfulness will do more toward establishing good mealtime habits or correcting poor habits than any amount of punishment, rewards, scolding, coaxing, or similar methods.

Family co-operation is another subject of importance in some cases. Occasionally a mother must contend not only with a lack of co-operation which is thoughtless, but she may have unintelligent interference from other members of the family. Sometimes her own fatigue or a tired and nervous father makes the situation look hopeless. It may be wise to feed the young child before the family meal and to continue to do so for two or three years longer than you might do under other circumstances.



If he has found that regurgitation or spitting up his food is an effective means of attracting attention, avoid fuss and confusion. Treat such an incident with calmness and unconcern, as though it were merely one of the events to be expected. If he is really ill, the fact is or will soon be apparent. Often the first sign of physical upset is a lessened appetite. If he is not ill, he is probably having a little unpleasant fun by reversing the swallowing process.

Sometimes an emotional atmosphere, an unpleasant discussion in the family, or a tired child or a tired mother will result in a loss of appetite. It is easier to avoid such situations than to straighten things out after the child has felt the effects.

The mealtime surroundings should be made bright and cheery and the atmosphere a happy one. No distractions from others, or the child's desire to play instead of eat, should be allowed to interfere.

Any mother constantly meets and solves difficult situations, and this is just another difficulty which can be worked out satisfactorily. In case the desperate mother answers, "I have tried just everything," perhaps that is just the trouble. She may have failed to do the simple things. She may have neglected to develop her own spirit of calmness and poise, which will make her home a happy one and mealtimes the happiest times of the day for the whole family.—*Gerber Products, Department of Nutrition.*

PLEURISY

GEORGE A. SKINNER, M.D.

PLEURISY is a relatively common disease, but it rarely occurs of itself. It is almost always a complication of some preceding condition. Hence, when pleurisy occurs, we usually try first to discover why it developed. Sometimes we are unable to discover the cause, and then it may be called "primary" pleurisy for a while, but nearly always after a time the real reason will be revealed.

By "pleurisy" we mean an inflammation of the smooth, glistening covering of the lungs. This covering is really a sac, which completely covers the lungs and has two layers, an outer and an inner. Between these layers is an efficient lubricant, which makes breathing easy and painless. We are not at all conscious of an effort of breathing so long as we are not exerting ourselves and are in normal health. If exertion occurs, the breathing may be accelerated, and even quite laboured at times; but it is not painful, because of this perfect lubrication. If anything causes roughening of the lung covering, or pleura, we are immediately conscious of the fact that there is pain when we breathe, especially if we take a deep breath. This pain is what is usually called pleurisy, and results when roughening of the inner surfaces of the pleura takes place, so that they do not slide easily over each other. They may actually stick together. If they do, there may be a decided limitation of motion of the breathing apparatus, but often the pain is present only when there is a deep breath, which tends to tear apart the sticky surfaces.

One of the most frequent causes of an inflamed pleura is an infection with tuberculosis. It is this form of pleurisy that may be slow in development and is often called "primary" pleurisy. We so frequently find later that tuberculosis is at the basis of the pleurisy, however, that we should be very slow to admit that pleurisy starts in the pleura itself. Hence, if an inflamed pleura announces itself through pain, and there is no cause readily found, tuberculosis should be suspected, and every possible means, including X rays, should be used to settle this point.

Pneumonia is frequently complicated by other troubles, and probably the most frequent complication is pleurisy. In fact, it is exceedingly rare that pneumonia exists without an involvement of the pleura. It could happen, if the pneumonia involved only the central portion of the lung; but this is seldom true. One of the earliest signs of pneumonia is pain upon breathing, and when such a pain develops more or less suddenly, pneumonia should be suspected and immediate treatment sought. Certainly the safest course is for the patient to go to bed at once and remain there until the cause of the pain is discovered. This early rest may make a great difference in the severity of the attack.

Pleurisy may complicate many other conditions, but especially the acute contagious diseases, such as measles, scarlet fever, and typhoid fever. These pleural pains are often an expression of a mild pneumonia.

All ages and conditions may be attacked by pleurisy. It occurs in infancy and early childhood, and through all the years to extreme age. It may be sudden and acute; or it may persist as merely a stitch in the side, when it is comparatively mild and involves a small area. Many of these local pains are due to injuries to the chest that have caused a mild local damage, often long-forgotten.

Among the serious complications of pneumonia and lung injuries, such as bullet wounds of the chest and stab wounds, is the development of fluid between the pleural layers. Usually the membranes are close together, and slide over each other gently. But if fluid develops between them, they gradually spread apart, compressing the lung more or less, and sometimes making breathing difficult.

The fluid may be clear like water (serious pleurisy), or it may become thick and yellow (purulent pleurisy). Both are serious; but the former may gradually get better by itself, and the fluid may disappear without leaving any damage. Or the pleura may become sticky and finally glue a part of the pleural surfaces together (fibrinous pleurisy). When pus develops, it practically always requires an operation to drain it out so that the infection can be controlled and the lung be released from the compression. In World War I we had a large number of such cases following gunshot wounds, especially where foreign materials, like bits of cloth, dirt, and metal, were carried in by the bullet. At the front it was not always possible to find such objects. Sometimes rubber tubes were put in at an emergency hospital near the front to allow fluid to escape, and in the trip back to the large hospitals at the rear this tube would slip into the chest and become lost. Operations under the X ray were remarkably successful in a large percentage of these cases, and while the damage was often serious and permanent, many recovered sufficiently to be able to resume their former occupations.

The logical treatment of these cases is that of the cause. The newer sulfa drugs are much used, also pneumonia antitoxin, which probably will reduce the number of complications of pleurisy in the future. It is highly probable that the number of pus cases of the pleura (empyema) will be distinctly lessened and the length of the sickness shortened by these newer methods of the treatment.

As pleurisy may be a serious disease, the treatment should be as early and thorough as possible. Acute pains of the chest should be investigated at once to determine the origin; but as with colds, influenza, and pneumonia, early bed rest is one of the most important aids in the treatment, and should be insisted upon until it is absolutely sure that it is no longer necessary. Intelligent and skilful applications of either dry or moist heat often do much to relieve the pain.

Promotion Rather Than Whisky

A NOTE in the Melbourne (Australia) *Sun* revealed the fact that Major Richard Bong, U. S. "Ace of Aces," who shot down his twenty-seventh Jap plane, would be promoted as a recognition of his gallantry, but would not receive a case of Scotch whisky or a case of champagne.

"General MacArthur said yesterday," continues the note, "that he did not regard liquor as an appropriate recognition of Bong's deeds. The airman had been promoted as soon as his record had been made official, and had previously gained practically all service decorations."

It is surely a poor way to show appreciation of a man's bravery to give him something that will impair his judgment, dull his sensibilities, and slow down his reactions. The words of ex-President Taft are to the point:

"To the man who is actively engaged in responsible work, who must have at his command the best that is in him, at its best, to him I would, with all the emphasis that I possess, advise and urge him to leave drink alone—absolutely. He who drinks is deliberately disqualifying himself for advancement."

Nobody questions the damage that has been done to the confirmed drunkard by the drink that has enslaved him. But many contend that no damage results from the moderate use of alcohol. However, a poison is a poison, in whatever form or quantity it is taken, and alcohol leaves its mark, in immediate impairment of efficiency, and in permanent injury to the brain cells.

It is a mistaken idea of hospitality that invites our service men to drink. It is a poor reward for bravery to give them that which will limit their efficiency.

HERNIAS

WHAT CAUSES THEM? CAN THEY BE EASILY RELIEVED?

LEROY E. COOLIDGE, M.D.

HERNIA, or, as commonly called, rupture, is a rather frequent physical defect. The term "rupture" is somewhat misleading, as it implies that the condition was caused by the tearing apart of the structures. This is rarely the case. Hernia, in the broadest sense, is the protrusion of an organ or part of an organ through its covering wall. An injury to the chest may cause a hernia of the lung, or a severe injury to the head may cause a hernia of the brain. Since these conditions are not common, they are definitely specified when the term is so used. In this discussion we shall consider a hernia as it applies to the abdomen.

There are, ordinarily speaking, four types of hernia. First, umbilical hernia in which the hernia appears at the umbilicus, or naval, and is usually due to a congenital weakness. This condition is very frequently seen in babies during the first few months. If the infant is properly strapped with adhesive or a suitable truss, this defect practically always disappears. Second, following an operation, when the wound, failing to heal properly, produces a weakness of the abdominal wall and a hernia. Third, inguinal hernia, in which the protrusion takes place above the fold of the groin. This is one of the weak points in the abdominal wall. Here there is a natural opening for the spermatic cord in the male or the round ligament in the female. Owing to the fact that the structures are more bulky in the male, this type of hernia is more common in men. Fourth, a hernia below the fold of the groin. Here is another weak spot known as the femoral ring, an opening through which the great blood vessels—the femoral vein and artery—pass into the thigh. A hernia at this location is known as a femoral hernia. Because of the extra width of the pelvic bones in the female, the opening is larger, and thus femoral hernia is more common in women.

Hernia may occur within the abdomen, as when there is a defect in the diaphragm, thus allowing some of the abdominal organs to pass into the chest cavity.

The cause of hernia may be due to a congenital weakness. The opening into the inguinal canal may be abnormally large. Then when any added strain is placed on this point, the hernia develops. Heavy lifting or severe coughing is frequently the immediate predisposing cause. There are general considerations which may directly affect the structural strength of the inguinal canal and thus modify the resistance to internal pressure. An individual who has a rugged physique would have better developed muscles about the internal ring and would be less likely to develop a hernia. On the other hand, persons with a soft, flabby musculature in all probability would have a similar condition about the local area, and any added strain, such as a severe coughing attack, predisposes to a separation of the structures.

A hernia is composed of three parts —the sac, the covering of the sac, and the contents of the sac. Whatever organ is protruding is covered by the peritoneal lining of the abdomen and the other layers of the abdominal wall. The protruding layer of peritoneum is called the sac. As this passes through the abdominal wall or along the inguinal canal, the covering is made up of the stretched-out muscle, fascia, and the skin. At the point where the hernia emerges from the peritoneal cavity, there is a constricted area known as the neck of the sac. Often this is the danger point, causing a strangulation of the protruding section of the intestine or other organ. Most often in the sac is found the intestine or the apronlike structure in the abdomen known as the omentum. The bladder, an ovary, the appendix, or some other structure may be found in this sac.

The symptoms of a hernia vary, but usually there is a dull aching in the affected area. This is aggravated by coughing or lifting. Only rarely do we note sharp, cutting pain, and that is when the hernia has rather suddenly protruded and cannot be replaced. There may be only a feeling of weakness and fatigue or mild cramp. We may know that a hernia exists if there is a definite swelling visible, and on examination by sense of touch a definite impulse may be noted on coughing or straining. When the causative factors are removed, the mass disappears, but will reappear during coughing or lifting. This means that the organ has been replaced in the abdominal cavity or the hernia has been reduced.

Sometimes hernia cannot be reduced by ordinary manipulation. This means that such a large amount of intestine or other structure has protruded and become swollen that it is impossible for it to return through the small neck of the sac. This may be a very dangerous condition and requires immediate operation. In the more chronic types it may be that the hernia has been allowed to remain out so long that adhesions have formed between it and the sac, and for this reason it cannot be reduced.

Hernia is not without definite danger and handicap. In some countries, today practically all large companies make a careful physical examination before hiring new employees. Most of them reject all the men with hernia. This is considered the only safe policy to avoid both the excessive loss of time due to disability and also the possibility of acute strangulation, a real health hazard. As a rule the Army and the Navy reject all men with hernia from regular service. The strenuousness of the service would increase the danger of strangulation, and serious results might develop if proper treatment was not immediately available. Life insurance companies refuse to accept as standard risk those who have hernias which are not properly retained by a truss.

Hernias developing in young babies are usually due to congenital defects, such as a large internal ring in the inguinal canal. The hernia develops because of the increased intra-abdominal pressure produced by the baby's crying. Occasionally it becomes strangulated and requires an operation. Generally a well-fitted truss will keep it reduced, and in a few months, owing to the rapid growth, the opening will close, producing a permanent recovery. If it does not return to normal, it is usually best to wait until the child is old enough to co-operate in the aftercare before doing an elective operation.

In elderly persons, it is often best to fit a truss. A truss is simply a belt or support with properly adjusted pads to create pressure on the point where the hernia issues from the abdomen. Usually, trusses are reasonably comfortable and correct the condition. Rarely do they produce a cure. In the various periodicals there are many advertisements claiming some unusual treatment or device to relieve hernia, with the insinuation that it is a cure. Generally such appliances are only poorly made trusses and are sold at a price much greater than the cost of a good truss made by some reliable firm.

There are so-called rupture specialists who travel about claiming some unusual method for relief. They are more likely to profit by the experience than the hernia sufferer.

The usual and best treatment for most cases of hernia is a surgical operation. Unless the patient has some general disease or excessive obesity, the chance for a permanent cure is very good. The operation has a minimum of risk and can be performed under local, general, or spinal anæsthesia. The operation consists of cutting down through the covering structures to the sac. This is dissected free, opened, and the contents examined and returned to

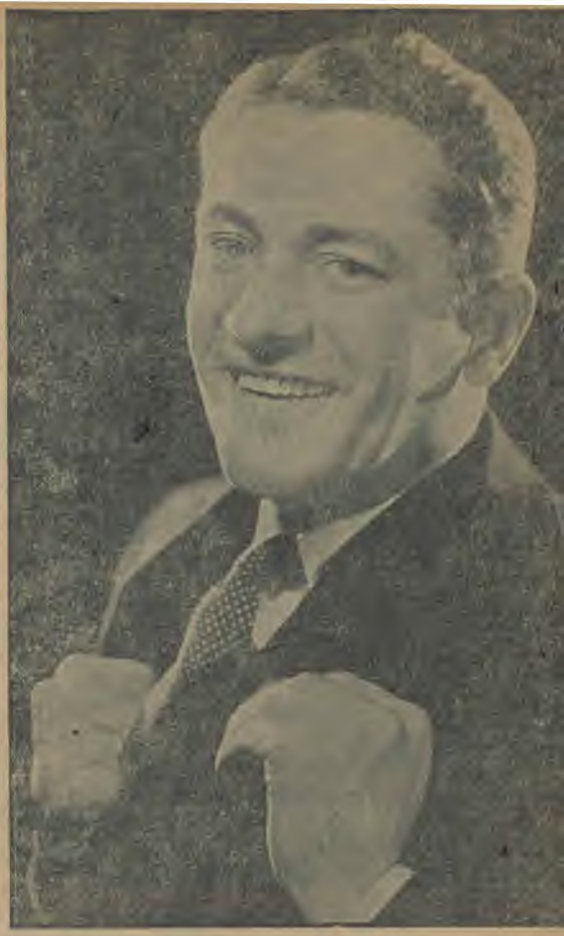
the abdominal cavity. The sac is tied, cut high up at the neck, and returned to the abdomen. Then the various layers of muscle and fascia are sewed in such a way as to strengthen the abdominal wall, and the skin is closed. Bed rest for two or three weeks is required, and then no heavy lifting or strenuous work is permitted for several weeks.

A simple method of treatment has been used which consists of injecting an irritating solution into the hernia sac. This produces adhesions and thus attempts to cure the hernia. There are many dangers, for one cannot visualize the contents of the sac and consequently may injure an intestine, or the solution may cause peritonitis. Even if the sac is destroyed without serious damage to the contents, the abdominal wall defects are not repaired.

The best procedure for anyone who suspects that he has a hernia is to go to his family physician and have an examination. If a hernia is present, then a careful physical examination will be necessary to determine the best treatment. If the physical condition is such that the operation is advisable, it should be done. Otherwise, the physician can advise about a suitable truss. Hernia should not be allowed permanently to endanger the life or health, but should have adequate treatment.

SOOTHING BALM FOR SORE STOMACHS

DIET FOR ULCERS



WINEA SIMPSON, M.D.

WITH the hustle, bustle, and nerve strain of a world at war, and the increasing consumption of tobacco and alcoholic beverages, it is not surprising that from many quarters come reports of the increasing incidence of peptic ulcer.

Stomach ulcer is an acute process, healing rapidly and spontaneously, and each new attack of symptoms is due to a new ulcer. The only ulcers which do not heal and in which symptoms do not disappear are the ones with complications. One of the primary reasons for the frequent recurrence of peptic ulcers is that the patient does not have sufficiently impressed upon his mind the fact that a careful diet and the avoidance of excessive strain, worry, and excitement must be his rule throughout life if recurrences and serious complications such as hemorrhage, perforation of the stomach, or obstruction are to be avoided.

The principle underlying all dietetic treatment of stomach or duodenal ulcer is to nourish the patient adequately and at the same time give the ulcer a chance to heal. To achieve this purpose the following rules are laid down:

1. Avoid all foods that will chemically irritate the ulcer. Any food which stimulates the stomach to secrete large quantities of hydrochloric acid is irritating to an ulcer. Among these chemical irritants are spices and all highly seasoned foods, strong acids, such as vinegar, strong fruit acids, pickles, meat and meat broth, gravies, concentrated sweets, all fried foods, pastries, alcoholic beverages, and tobacco smoking. There is no question whatsoever that smoking is a hindrance to healing. After smoking, the acidity of the gastric contents of patients with peptic ulcer has been proved in some instances to be twice that of the acidity before smoking.

2. Avoid all foods that will mechanically irritate the ulcer. Among the mechanical irritants are foods with tough fibre, such as coarse vegetables, the pulp and seeds of fruits, and bran-containing cereals. Overeating or gas-producing foods may cause pressure pain due to distention of the stomach walls. Foods too hot or too cold are also irritating.

3. Use foods which are known not to stimulate the secretion of hydrochloric acid and which depress as far as possible its concentration. Fats in the form of cream and olive oil are used to depress the flow of acid in the stomach. Protein in the form of milk and eggs is used because this type of food combines readily with the acid of the stomach and reduces the free hydrochloric acid.

4. Serve four meals a day in moderate quantities, to control both the peak of acidity and the deep hunger contractions.

5. Specifically, a lack of vitamin C and protein has been noted in ulcer cases, and, in balancing the diet, adequate provision should be made for these essentials. If the patient is unable to tolerate tomato juice or diluted orange juice, then vitamin C should be taken in concentrated form.

6. Avoid the use of alkalies unless a physician prescribes them. If the stomach contents are made alkaline by the taking of alkalies, such as soda, the immediate effect is relief of pain, but the after-effect is to irritate the stomach, causing it to secrete more acid than otherwise. There is also the danger of alkalosis from the prolonged use of alkaline powders such as soda.

Alkalies may result in the formation of kidney stones. Even the use of aluminium hydroxide and aluminium sulphate, which recently has become quite widespread, may have deleterious effects, such as an interference with the absorption of inorganic phosphates, iron, and other essential minerals from the intestinal tract. Constipation, fæcal impaction, and even intestinal obstructions have been reported from the use of these alkalies. Doctors Dick and Eisele, writing for the *Journal of the American Medical Association*, January 3, 1942, state:

"It is illogical, however, to expect the use of alkalies to prevent recurrences unless one is willing to advise such use throughout the life of the

patient. In many instances such ingestion of alkali would probably be more detrimental than the ulcer itself."

With the foregoing diet, salt is used in moderation, but no other condiment is allowed. The drinking of at least six glasses of water a day is insisted upon. Olive oil before each meal is helpful to aid in the healing of the ulcer and to prevent constipation. Four meals a day should be sufficient, but if there is pain in the night, give the patient a glass of milk with cream added. The effect of this programme should be an immediate relief of symptoms. Within two or three days the patient should be comfortable and free of pain whether up and about or at rest. Failure to gain relief indicates one of three things: incorrect diagnosis, allergy, or complications. In such case a physician should be consulted without delay.

MENUS FOR UNCOMPLICATED ULCER CASES

Breakfast

1 tablespoon olive oil
1 glass milk
Cereal-strained oatmeal with cream
Egg—soft boiled or poached
Enriched bread or toast with vegetable margarine
Fruit juice or bland fruit

Luncheon

1 tablespoon olive oil
1 glass milk
Creamed cheese or egg
Enriched bread with margarine
Strained vegetable
Potato—mashed with cream or baked
Pudding

Mid-afternoon

1 tablespoon olive oil
1 glass milk
Crackers
Stewed fruit

Supper

1 tablespoon olive oil
Creamed soup—potato, rice, noodle, or pea
Coddled egg
Toast and margarine
Apricot or banana whip

The Latest in HEALTH and SCIENCE

TUBERCULOSIS PROGRESS

FIVE tuberculosis conventions met simultaneously in Chicago recently. Three dramatic new developments were reported in the fight against the disease which still takes nearly 60,000 lives a year in the United States alone:

Most dramatic is the removal of whole lungs (pneumonectomy) or parts of lung (lobectomy)—a drastic operation which sometimes completely extirpates the disease. This operation was once so hazardous (about 35 per cent mortality) that it was used only in otherwise hopeless cases. But Drs. Richard Overholt and Norman Wilson of Boston told the American Trudeau Society that the technique has now reached a point where the operation "should be considered" early in tuberculosis and not used as a last resort.

Doctors used to think that tough-skinned tubercle bacillus would never succumb to a drug. But promin, diasone, promizole, and the brand-new diamino-

diphenylsulfone (all sulfa drugs) have showed good results against tuberculosis in guinea pigs, fair promise to human patients. Drs. Horton Corwin Hinshaw and William H. Feldman, of the Mayo Clinic, told the Society that tuberculosis will probably succumb to a drug some day, but that it is too early to evaluate any drug tried so far. For the sake of Europe, which is suffering a war-time tuberculosis increase, they urged that search for such a drug be speeded up.

Small-sized (4-by-5-in. and 35 mm.) X rays were the main subject of the Mississippi Valley Conference on Tuberculosis. These films, in use about two years, and used on recruits by the Army, cut the cost of X rays considerably, and make possible mobile X-ray units which can examine 50,000 people a year.

VITAMIN A: ITS EFFECT ON ACNE

ACNE is defined as chronic and recurrent papular and pustular lesions of the pilosebaceous follicle. Pathogenesis is poorly understood and treatment inadequate. Aetiologically, the blame for the disease has been placed on almost every conceivable cause. Some regard the disease as disturbance of fat metabolism. Straumfjord accidentally noted the disappearance of associated acne while treating follicular hyperkeratosis with large doses of vitamin A over many months of time. Of 100 patients who took 100,000 units daily of vitamin A over periods of not less than six months and usually longer, 84 per cent were "cured," 14 per cent improved, and 2 per cent were unimproved. Thirty-six per cent became completely free from acne. The effect of vitamin A on acne becomes intelligible when it is borne in mind that hyperkeratinization of the follicle is the basic primary lesion in acne. The response of follicular hyperkeratosis on the one hand, and acne on the other, to the administration of vitamin A suggests that their cause is the same, that both are cutaneous lesions of vitamin A deficiency. —"American Journal of Digestive Diseases."

RECIPES

POTATO AND ONION SOUP

4 large potatoes; 2 large onions; 4 cups water.

Clean the potatoes thoroughly, but do not peel them; slice. Wash onions, removing only the first thin, outer skin; slice and boil with the sliced potatoes.

When vegetables are cooked, rub through a colander, and add sufficient hot water for six servings. Salt, reheat, and serve with croutons browned in butter.

One and a half cups milk and half a cup cream may be added to the soup after the vegetables are boiled, thus making a delicious soup. Add chopped celery, parsley, or fresh sage to get a variety of flavours.

BEAN LOAF

2 cups cooked or baked beans; ½ cup cream; ½ cup tomato; 1½ cups fresh bread-crumbs; 1 tablespoon chopped parsley; 1½ teaspoons salt.

Soak the beans over night, then put on to cook in cold water, allowing them to boil continuously until perfectly tender and cooked down rather dry. Mash them with a fork and add all the other ingredients. Turn into a well oiled pan and bake until nicely browned. Serve hot or cold.

BROWNED POTATOES

Wash and put potatoes on to boil in their skins. When tender, peel and place them in a baking pan. Spread a little melted butter over each one and put in a hot oven to bake to a golden brown.

TOMATO WITH CREAM CHEESE

6 medium-sized fresh tomatoes; 1½ cups cream cheese; ¾ cup bread-crumbs; 1½ tablespoons butter; ½ teaspoon salt.

Place a layer of sliced, peeled tomatoes in the bottom of a buttered baking pan. Over this place a layer of cream cheese and bread-crumbs. Repeat, having the bread-crumbs on the top. Salt and dot with bits of butter. Bake until top is a nice brown. Garnish with parsley and serve hot.

FRUIT SALAD

4 oranges; 1 small pineapple or one tin sliced pineapple; 4 plantains; ½ cup sliced almonds.

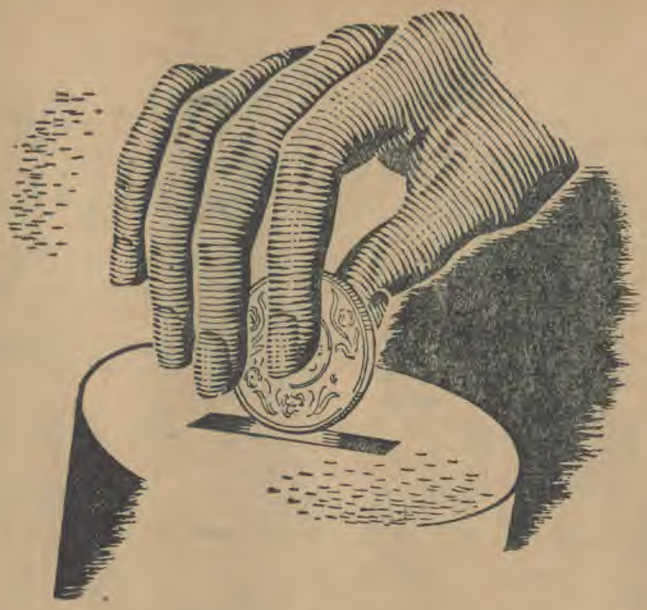
Remove the white skin from the sections of the oranges and separate the sections into small bits. Add the pineapple, cut into small bits, and sliced plantains.

The dressing is made from four tablespoons orange juice, four tablespoons pineapple juice, and two teaspoons lemon juice. Add one teaspoon sugar and heat over the fire; thicken with one half teaspoon cornflour blended in a little of the cold juice. When cold, pour over the fruit, serve on crisp lettuce, and sprinkle the top with the nuts.

RICE CREAM

3 level tablespoons rice; 4 level tablespoons sugar; small pinch salt; 2 quarts rich milk; ½ teaspoon vanilla.

Wash the rice and have it dry when it is added to the other ingredients. Put in moderate oven and stir occasionally to keep brown top mixed into the pudding. It should cook slowly and thoroughly without a lid. More milk may be needed as it evaporates. This dessert when served should have a creamy consistency with a delicate flavour. A bit of shredded pineapple may be added, if desired.



EVERY RUPEE SAVED NOW...

will buy more when the war ends. With prices as high as they are today it is plain commonsense that you are getting bad value for your money. Besides, remember that prices are falling. Compare the prices of cloth, foodgrains, medicines etc. a year ago with prices today. The wise man saved his money and can now buy cheaper than before. The wisest thing of all however, is to save all you can now in order to get twice as much for your money when peace returns.

Be sure that the money you save is safely invested. Jewels, Land, buildings, manufactured goods and commodities are bad investments these days. Their prices are abnormally high and you will certainly find one day that they are coming down.

For security and fair return put your money into Government Loans, National Savings Certificates, Insurance, Co-operative Societies, Post-Office Savings Bank or a Savings Bank Account

Save

ALL YOU CAN AND INVEST ALL YOU SAVE

A NATIONAL APPEAL BY THE NATIONAL WAR FRONT

AAA 1113

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 stamped, addressed envelope accompanies 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.

LOTIO ALBA: Ques.—"Please give me the prescription for lotio alba."

Ans.—The following is the prescription for lotio alba: Pot. sulph. gm. 12, zinc. sulph. gm. 12, aqua anisi q. s. ad. cc. 120.

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COCONUT PULP: Ques.—"Please let me know the starch, protein, fat, sugar, and vitamin contents of coconut pulp."

Ans.—One cup of shredded coconut, weighing about 6½ ounces, contains the following:

Carbohydrate	234 calories
Fat	33 "
Protein	33 "
Calcium	.0642 gm.
Phosphorus	.0963 "
Iron	.0032 "

It is also a fairly good source of vitamins A and B.

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COUGH; ECZEMA; RHEUMATISM: Ques.—"1. I am nineteen and have a bad cough. 2. I also have eczema. 3. My mother has a tendency to rheumatism. She is quite fat. How can she reduce and get rid of rheumatism?"

Ans.—1. I would suggest that you have a thorough medical examination by a qualified practitioner. Your cough may be a serious one, so it is best to check it. 2. Eczema is a stubborn skin disease, and it needs vigorous treatment. You may try an ointment of 5 per cent ammoniated mercury, 1 ounce containing 30 grains of resorcin, and 30 grains of salicylic acid. 3. Rheumatism may be due to some infection in the body. Therefore your mother's case needs further investigation. She may have glandular deficiency.

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THINNESS; CONSTIPATION: Ques.—"I am tall and thin. I also suffer from constipation. Please tell me how to improve my health."

Ans.—It seems to me that you are worrying too much about your condition. If your bones are naturally thin, and you had an excessive amount of flesh and fat, you would be out of proportion. However, you can build up quite a bit by proper exercise and by eating plenty of fresh fruits, vegetables, milk, cream, nuts, etc. You should also keep your bowels open by the use of a mild laxative, if necessary, such as milk of magnesia. However, fruits and vegetables are good laxatives. It would be advisable to have a thorough examination by a competent physician, and have your basic metabolism satisfactorily established to determine the activity of your thyroid gland. This may be the cause of your not gaining any weight.

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PULMONARY TUBERCULOSIS; NORMAL BLOOD COUNT; HOT SITZ BATHS: Ques.—"1. I have pulmonary tuberculosis. What tonic would be good for me? 2. What is the composition of normal blood? 3. Are hot sitz baths harmful to patients suffering from pulmonary tuberculosis?"

Ans.—1. According to your description, you do not have any positive findings of pulmonary tuberculosis. I would suggest that you have a Von Pirquet test done. Ferredol is a very good tonic if you could get it. Failing this, you may use Halimalt, Radiomalt, or their substitutes. 2. Following are the findings in normal blood: Red blood cells 4½ to 5 millions, hemoglobin 80% to 100%, white cells neutrophils 65% to 70%, lymphocytes 25% to 30%, eosinophils ½% to 1%, basophils ½%, large monocytes 1% to 3%. 3. Hot sitz baths are not harmful provided they are not overdone.

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LEUCODERMA: Ques.—"Is leucoderma an hereditary disease? Kindly prescribe any diet or medicine to help this condition."

Ans.—Leucoderma is not an hereditary disease. The real cause is unknown. It occurs in association with goitre, venereal diseases, malaria, Addison's disease, typhoid, scarlet fever, and severe cold, etc. It is common in tropical countries. There is no particular diet that will cure this disease. Try a daily application of Ludermol, prepared by Smith Stanistreet and Co.

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REDUCING HIPS: Ques.—"Kindly suggest a way by which I can reduce my hips."

Ans.—If the location of fat is only around the hips, then electric massage with a powerful motor will bring results if treatment is carried out for several months.

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BLACK SPOTS ON SKIN: Ques.—"I have black spots on the chest, abdomen, and upper part of arms and legs, which the doctors say is lichen planus. I have consulted several doctors who have prescribed certain lotions, but the condition remains unchanged. Can you help me?"

Ans.—Lichen planus is an inflammatory skin disease. This is characterized by small, shiny, flat, many-sided pimples, purple, crimson, or violet colour, which

may become rough, horny, or scaly. If your case fits the above description, then you will have lichen planus. There are several causes for this condition, one of them being nerve exhaustion from mental strain. Malnutrition, malaria, or some other diseases may also be the cause of it. Treatment consists in the removal of the cause first. No doubt you have tried many ointments and injections. However, you may try an ointment of Amm. Merc. 5 per cent, 1 oz. containing Resorcin gr. 30, salicylic acid gr. 30. In extreme cases, X-ray therapy is helpful. Please remember that this disease is very stubborn, and you must be patient and faithful in treating it. General use of fresh fruits, vegetables, milk, and some tonic will also be helpful.

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BLACK MARK UNDER EYE: Ques.—"A friend has a black mark under the eye. What can be done to remedy this?"

Ans.—The information you have given regarding your friend's condition is not enough to enable me to arrive at a diagnosis. A black mark may be a mole or just a little discoloration. If it is a mole, it can be removed by electricity. If it is just a discoloration, it is best not to treat vigorously. Application of 1 per cent mercury ointment may be tried.

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SHORT HEIGHT: Ques.—"My son, aged nearly seven, is short for his age. Short height in our family seems to be hereditary. What can be done to help him grow taller?"

Ans.—If short height is hereditary in your family, there is nothing that can be done to increase the height of your child. There are certain cases of glandular deficiency which can be helped in early years by medication. I would suggest that you have your child examined by a competent internal glandular specialist to determine if he is deficient.

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PREMATURE LINES ON NECK; SLEEPING WITHOUT PILLOW: Ques.—"1. What causes premature lines on the neck? 2. Is it good to sleep without a pillow?"

Ans.—1. Premature lines or creases on your neck may be due to bending of the neck and loss of muscle tone. I would suggest massage in the opposite direction, that is, away from the creases for about ten minutes twice daily. 2. If you are comfortable, it may be well to sleep without a pillow.

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INDIGESTION: Ques.—"I suffer from 'indigestion and wind.' Sometimes I feel a sort of jerk in my heart, but the doctors say there is nothing wrong with it. What is the cause of this?"

Ans.—Your "indigestion and wind" may be due to dietary error. Eliminate gas-forming foods, such as dried beans, fried foods, and excessive amount of flesh food. You may use hot water bag after meals and the following powder, one teaspoon before each meal, in hot water: Cal. Gluconate 2 ozs., cal. carbonate 2 ozs., bis. subnitrate ½ oz.

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SQUATTING ON GROUND: Ques.—"Does squatting on the ground for hours at a time affect one's normal health? Does it cause strain on the spinal cord, pressure on the digestive organs, etc.?"

Ans.—This certainly is not a good position in which to perform work. There is no question that it will affect normal health. It is bound to interfere with the free circulation to the lower parts of the body and affect the digestive system. As digestive organs are cramped, they will also suffer. When a person is working, he should be in the most comfortable position if the maximum amount of work is expected of him.

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MEDICINES FOR GROWTH: Ques.—"I have seen medicines advertised for growth increase. Are these genuine?"

Ans.—Pediacrin is an American preparation and is not available in India at present. Furthermore, it is used only in cases where there is glandular deficiency. People who have inherited short height will not be affected by this medicine, or any other medicine that is advertised.

BLACKHEADS: Ques.—"My sister, aged twenty-two, has enlarged pores in her nose, which eventually turn into blackheads. Can you prescribe a remedy?"

Ans.—Blackheads are a result of acne or pimples. Unless a very irritable condition is present, hot water application should be carried out very frequently. Steaming of the face with boric acid solution is of value, too. After steaming, blackheads should be extracted with tweezers. An alcoholic lotion of sulphur may be applied during the day. The diet should consist mostly of fresh fruits, vegetables, and milk, and should be free from meats, fats, and greasy foods, and large quantities of starchy foods.

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SEDIMENTATION IN BLOOD; RHEUMATISM: Ques.—"1. What is meant by the rate of the sedimentation of blood? Please recommend any handy book on the subject. 2. My son had an attack of rheumatism when he was twelve years old. He is now thirty and has had another attack. What treatment do you suggest?"

Ans.—1. Sedimentation test is done to determine the time it takes for the red cells to settle. It is of value in certain fevers and wasting diseases. The normal rate is from 3 to 12 mm. You may get further information on this subject from any standard up-to-date book and clinical laboratories. 2. Rheumatism may be due to some focal infection. I would strongly advise you to have your son thoroughly examined by a competent physician.

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REMOVAL OF HAIR: Ques.—"Is electrolysis available in India?"

Ans.—Removal of unwanted hair on the face by electrolysis can be done in large hospitals in one of the large cities like Bombay or Calcutta.

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MASTURBATION; WHOLE-WHEAT BREAD; GHEE; WEIGHT LIFTING; HEALTH MAGAZINES: Ques.—"1. A friend of mine practised masturbation for about five years, but has now overcome the habit. How can he improve his health? 2. What is meant by whole-wheat bread? 3. Which is better—ghee or butter? 4. How can systematic weight lifting be performed without any harmful effects to the body? 5. Please suggest some good health magazines available in India at the present time."

Ans.—Masturbation is a bad habit to form. Your friend has naturally weakened his sexual organs. I would suggest a wholesome diet composed of fresh fruits, vegetables, milk, nuts, and elimination of spicy foods and all meats, including fowl, fish, and eggs. A daily cold bath in the morning and evening will be of help. It may be advisable to take three bromides, 15 grains, at bed time for a while to get over this acute trouble. 2. Whole-wheat bread is simply made from the flour of the entire wheat, without extracting all the bran. It is naturally a bit coarse, but more wholesome. 3. Butter is for table use, whereas ghee is for cooking. They both have equal food value, and their use is a matter of taste. 4. Systematic weight lifting may be performed without any harmful effects if it is done gradually and stopped when capacity is reached. It should not be overdone. 5. I know of very few real worthwhile health magazines printed in India. There are many of them in America. For a list of them you may apply to the Oriental Watchman Publishing House.

ANEURISM: Ques.—"What is aneurism? Why is it considered serious? A friend of mine has aneurism near the wrist, said to be caused by acute stomach trouble."

Ans.—Aneurism is dilatation (bulging or enlargement) of the artery. Usually the wall is very thin and friable. It is serious when it is in the aorta or other important arteries in the body. Aneurism of the wrist does not seem to be consistent with stomach trouble. Sudden high blood pressure is very serious, so it needs immediate investigation.

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PSEUDO-MUSCULAR HYPOTROPHY: Ques.—"My two daughters, now aged eleven and twelve and a half, have been suffering from pseudo-muscular hypotrophy since the age of five. They were treated with intramuscular administration of vitamin B6, but now this is not procurable in India. Can you enlighten me concerning this disease?"

Ans.—Pseudo-muscular hypotrophy is a progressive disease, and I am sorry that there is no positive cure for it. Your children may be helped by electricity and massage. If you wish to give them vitamin B6, you may try Elixir B-G-Phos., prepared by Sharpe and Dohme.

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SMALL STATURE; KIDNEY DISEASE: Ques.—"1. I am twenty-two, and very short for my age. What is the cause of this? 2. I have developed kidney trouble, and have a lot of pain. The doctor advises me to use Kruschen salts regularly, but this has not proved effective. Please advise me."

Ans.—1. Small stature may be hereditary or due to glandular disturbance. I am not able to tell you which is the case. 2. The use of Kruschen salts will not cure kidney disease. I would suggest that you have a thorough examination by a competent physician. As kidney disease is not an ordinary disease, it needs immediate attention. For the present I would suggest that you take fresh fruits, vegetables, milk, and other non-irritating foods, and eliminate all meats and eggs from your diet.

HOW LIGHT AFFECTS YOUR EYES

RICHARD A. BERGIN, OPT.D.

WITHOUT light there could be no seeing. Vision depends upon the transmission of light from an object through the transparent parts of the eye to the retina. But since the time when nature designed the human eye, the quality and quantity of light which it must deal with have changed.

Man has developed electric lights. Brighter and brighter have become his home and his place of work. Today the average home is illuminated by 366 times as much light as it was thirty years ago.

In addition to the great amount of light we must face in our own homes or at work, we are constantly exposed to glaring lights from shop windows, signs, and headlights, reflected and intensified by the shining surfaces of walls, mirrors, and many other reflecting surfaces in our surroundings.

Illumination engineers have proved the value of having sufficient "directed" light; but often the lighting in home, school, or office is not scientifically directed. Illumination laws are frequently violated—chairs face windows, lighting fixtures may be improperly and hazardously placed. While there may be ample light in the room, there may also be present the enemy of good vision—glare. From every shining surface beams of light reflect back into the eye. Many persons are working regularly on jobs in the great war plants and other industries where they are required continuously to focus their attention on brilliantly polished or painted surfaces with lights incident upon them from many directions. Such conditions are uncomfortable and tiring, as well as tending to hinder good work.

Nature has provided the eye with brows and lashes to help shield it from excessive light. The pupil of the eye also dilates or contracts as the need may be to control the amount of light admitted to the retina. By squinting and frowning we are able to shut out still more of the excessive light, but this requires an effort, and after a short time the muscles become fatigued, as would your arm if you attempted to hold it in an abnormal position for an equal length of time.

There is no question but that present-day living does impose upon us physical, mental, and nervous hazards totally unknown to our fathers, and we must do all we can to compensate for these conditions. Knowing this, it would be advisable to study the illumination conditions of our environment, analyzing the light source—whether it is natural, artificial, steady, intermittent, of high or low intensity. All these have a direct bearing on eye comfort. Then, in the interest of better vision, it should be decided whether or not there are countermeasures. If such help can be found and proved, why not make use of it?

The demand for tinted, transparent substances, even before the use of spectacle lenses, arose out of an elementary need for protecting the eyes from the dazzling brilliance of sun, snow, sand, and sea. The Eskimos met the need with their curious slit-shaped goggles. It was an early observation that the lack of such protection against excessive light caused pain, severe inflammation, and frequently even sun or snow blindness.

The first definite record concerning the use of absorptive lenses is that of Jarius Ancott, who, in 1561, advocated the use of green lenses as beneficial to the eyes. More than a century later, in 1672, Richard Pierson favoured the use of blue lenses in preference to green. From then on an increasing interest in absorptive lenses produced a variety of different tints and shades, only a few of which survive to this time because of their outstanding merit.

Without a doubt, ample illumination is necessary for comfort in reading and working, but too often, in order to obtain sufficient over-all intensity, some persons find themselves in a position where glare is unavoidable, and thus a source of illumination, that is in itself not too intense, becomes an irritating factor to the eye that must be always conscious of its presence.

Under such conditions many persons find comfort in a slightly tinted lens to cut down the excessive light or glare. This prevents the shock to the nervous system that is caused by too great contrasts of light and dark.

If you are wearing prescription glasses, your doctor may find it advisable to prescribe tinted lenses according to your own need. Many times an absorptive lens of a slight tint will actually improve the vision as well as be more comfortable than a white lens.

At all times you should be sure to obtain the best quality lenses possible. Never take the risk involved with the use of an inferior grade. Mr. E. Raymond Cato, chief of the California Highway Patrol, recently stated: "Many accidents have been traced to the use of poor sun-glasses." Regardless of whether you need tinted prescription lenses, or merely the darker sun-glasses for excessive sunlight, it pays in every way to secure the best.

(Continued From Back Cover)

container must be fairly heavy, and will probably never be as cheap as the familiar spray gun. Freon itself costs more than the common oil spray, but its greater efficiency—plus the power of new insecticides such as DDT—makes it cheaper in actual use.

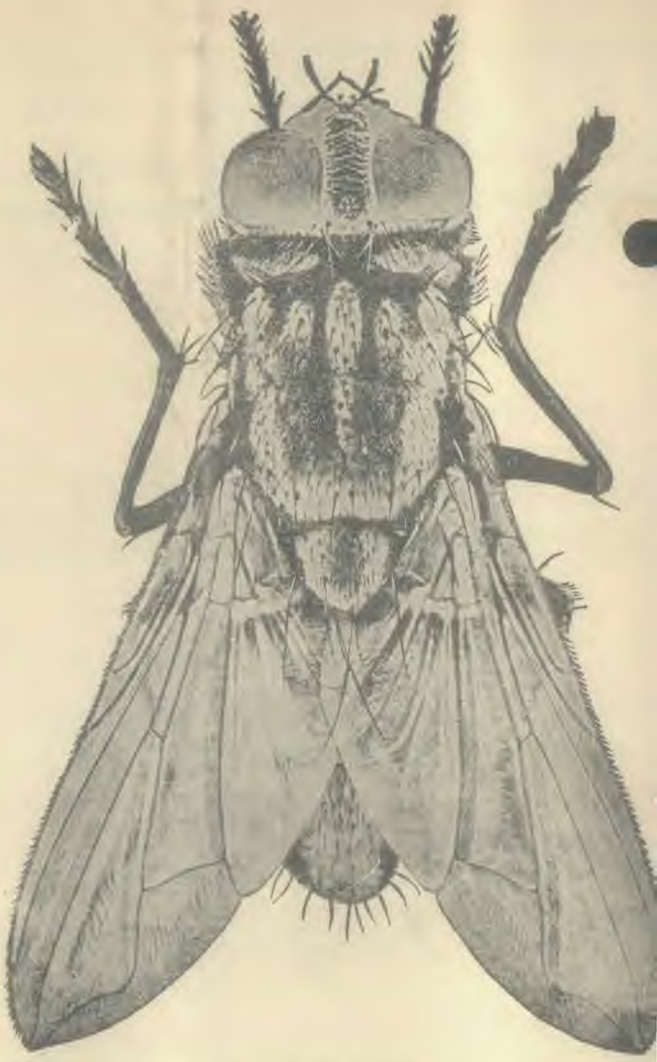
Much research remains to be done. Most insecticides are highly selective or specific. For example, DDT is deadly to flies and a long list of other insects, yet it will not affect spiders. Insecticides to be used in the garden must contain substances that will kill pests, but will not harm beneficial insects, such as bees. To test new insecticides, the Bureau of Entomology maintains a fabulous insect zoo, where millions of insects of many varieties are reared every year.

In the task of freeing man from the dangers and discomforts caused by insects, there has been more progress in the past year than in the preceding half-century. Progress in the next few years may be even more startling. —*Condensed from Popular Science Monthly.*

FREEDOM FROM INSECT PESTS

* * *

ALFRED H. SINKS,
With additions by the author



You must kill the fly or he may kill you. The fly swallows its food several times. A dirty spot containing thousands of germs is left where the fly was standing.

AT LAST science has found the weapons for total victory on the insect front. This news means that in the years to come we can fight more successfully against many diseases. One case of tuberculosis in five, much dysentery, enteritis, and typhoid fever have been attributed to the common housefly. Victory over the insect will not eliminate these scourges, but it will go far toward reducing their danger.

Effective control of biting pests will also add new comfort to our lives. In summertime we can forget our ineffectual counter-attacks with old-fashioned sprays, evil-smelling citronella oil, flypaper that messed up the house, but failed to disturb the flies.

Shortly after Pearl Harbour, chemists and entomologists of the U. S. Department of Agriculture began a search for means to protect our fighting men against insect pests and insect-borne disease. In the past few months three new weapons have been perfected to combat man's insect enemies:

First, a powerful insecticide, dichloro-diphenyl-trichloroethane—DDT for short. DDT can be made cheaply in great quantities. In powder form, dusted on underclothing or inside shirt sleeves and trouser legs, it protects against body lice, and to some extent against ticks and chiggers. Used in a spray, it will make your living-room walls toxic to flies for as long as three months after one spraying! Yet this remarkable chemical is not even faintly irritating to men or animals.

Second, a new chemical compound for use outdoors to keep insects away. This new repellant—a combination of three substances formerly used—is three times as powerful as citronella, yet nearly odourless.

Third, a startling new method for using the insecticides we now have, making them many times more effective.

Back in 1935 a thirty-year-old chemist named Lyle D. Goodhue came to work in the Bureau of Entomology's laboratory at Beltsville, Maryland, U. S. A. One day he jotted down this random thought in his well-filled notebook: "Why couldn't a gas like Freon—which liquefies under a few pounds' pressure and boils at 21° below zero—be used as a solvent and propellant for insecticides?" That was how the new "aerosol" insecticides were born.

An aerosol is a suspension of fine particles in air or gas. The common oil-spray insecticides consist of heavy droplets that quickly settle on the floor, walls, or furniture. In an aerosol the insect-killing substance is so finely divided that the tiny particles float in the air like smoke or fog (for as long as five hours in still air) and ultimately find their way into every crack and cranny.

Pyrethrin, most deadly of insecticides to mosquitoes, if released in an aerosol, is many times as effective as the oil spray used in the common household spray gun. Five milligrams—one very small drop—of the extract will in one minute kill every mosquito in a room twelve feet square and seven feet high.

In October, 1941, Dr. Goodhue thumbed through his notebook and ran across his note about Freon.

Freon, a synthetic organic compound, has for many years been used as a refrigerant. Under compression in your refrigerator, it is a colourless and tasteless liquid. Released into the air it instantly becomes a harmless gas, non-poisonous and non-inflammable. Pyrethrin dissolves perfectly in Freon. Released from the valve of a metal container, the expanding gas spreads the molecules of mosquito-killer in a fine mist. Freon maintains enough pressure to propel the solution into the air as long as a drop remains within the metal cylinder. There is no waste.

Today every soldier in mosquito country is armed with an "aerosol bomb"—a specially designed container about twice the size of a hand grenade, containing enough pyrethin-Freon aerosol to fumigate a pup tent 250 times or the fuselage of a big bomber 50 times.

Other insecticides may be dissolved similarly in Freon, and Dr. Goodhue has been experimenting with the miraculous new insect-killer, DDT. Last summer the huge cafetaria used by workers at the Beltsville lab was completely rid of insects by DDT fumigations. Neighbours brought their pets to Goodhue to be rid of fleas, and they rarely had to bring them a second time; anything sprayed with DDT remains toxic to insects for months. Sprayed on wire screens, DDT stops dead in their tracks all the insects that used to get in through the mesh.

Aerosols will be a godsend to the dairy farmer and to many industries. Half a dozen fumigations should keep a dairy barn insect-free for an entire season. A big industrial plant in Philadelphia was completely rid of insects in twenty minutes by spraying with an aerosol.

Paradichlorobenzene, the most effective weapon known against clothes moths, dissolves readily in Freon.

Mixed with nicotine, aerosols have already been used with success as garden sprays by Department of Agriculture experts.

Manufacturers are working now on a container that will be cheap and satisfactory for civilian use. Because the Freon must be kept under pressure, the

(See Inside Cover)

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ORIENTAL WATCHMAN

OCTOBER SUPPLEMENT 1944

SHALL WE HAVE A CHURCH-DICTATED PEACE?

The Divine Mission of the Church in This War-Torn World

CARLYLE B. HAYNES

THE Allied Nations are winning the war. The allied churches propose to win the peace.

Organized government has combined all its resources to gain a supreme victory. Organized religion, after first protesting the war, then proposing to stop it with a half victory, now comes forward to seize and control the anticipated fruits of victory.

Not only are peace societies putting forth elaborate plans for peace, but peace proposals are issuing from religious sources in considerable numbers regarding the form and nature of world government after the war.

The Roman Catholic Church is making its suggestions, based on the teaching of the papal encyclicals, involving the revival in modern form of the mediæval Holy Roman Empire.

The Protestant churches of America, through the Federal Council of the Churches of Christ in America, have presented their Six Pillars of Peace.

Churchmen everywhere were much heartened by the words of President Roosevelt, spoken in December, 1941, in response to the pledge of loyalty offered him by the Catholic hierarchy, when he said:

"We shall win this war, and in victory we shall seek not vengeance, but the establishment of an international order in which the Spirit of Christ shall rule the hearts of men and nations."

These words set forth the aspiration as well as the intention of leading statesmen, as well as those of great governmental and ecclesiastical organizations.

The purpose so stated is a lofty one. If it could be realized, only one thing could result—the age-long dream of the passing centuries, the final establishment of the kingdom of God. For the rule of the Spirit of Christ in the hearts of men and nations is the kingdom of God, nothing less.

U. S. troops in march-past at Windsor.

W. N. P. S.

That, of course, is not what the President had in mind. Speaking to a religious group he put his thought in religious terminology, conveying more to religious people, no doubt, than he intended to impart. He was giving expression to the vision, the hope, and the purpose of many minds of a world in which want, fear, oppression, injustice, hatred, prejudice, lawlessness, and war are forever banished.

Through all the centuries of human history the best wisdom of earth's wisest, and the greatest strength of earth's strongest, have striven to realize this glorious vision of a world prosperous, peaceful, and secure.

Until now the vision has remained a vision. Has the time come at long last when it may be realized? Following this appalling global tumult and disaster, will the wisdom of statesmen, military advisers, economic experts, educators, and religious leaders be so chastened—and improved—as to enable them to establish the long-desired parliament of man and federation of the world, together with an international police force to create and maintain global order, justice, peace, and security?

It is an old hope, and it is a good hope. Through long centuries, and in all parts of the world, among all classes of men in all religions, these longings and desires for a perfect human society have appeared, and until now have been only unsatisfied cravings.

A historical survey of ideas which have been expressed as the millennial reign, the City of God, the Holy Catholic Church, the Holy Roman Empire, the Fifth Monarchy, Christ's Crown and Covenant, the Christian State, Utopia, would disclose that this vision has been cherished, and attempted to be realized, during all the Christian centuries, and before.

It is the idea of a commonwealth in which humanity is to attain its perfection. Many of the greatest minds of the ages have been intrigued by the thought of an ideal state designed for the elevation of humanity.

It has been the aim of noble legislators, statesmen, and philosophers. They have imagined, devised, and proposed many different schemes for its realization. Actual attempts have been made to achieve the perfect state, and these have left their influence on history and human thought.

That the kingdom of God ought to rule on earth is a self-evident proposition to a Christian. Mediæval Christians came to believe that the kingdom Christ had instituted was the society of believers organized into a body by the government of bishops with the power of the keys of the kingdom of heaven. Earthly rulers, consequently, should learn from the teachers of the church how God would have them use their authority, and ought to use it in accordance with their instructions.

One who loves his fellow men cannot help sympathizing with their ardent hopes for a permanent cessation of the

turmoil of the world. We long for peace and justice to be permanently established in this world as ardently as those who look for this to be accomplished by human means. Our minds leap eagerly and gladly forward to that time when the earth shall be forever purged of war and hatred.

We sympathize with the men of large hearts and broad minds who stand as sponsors for every agency making for peace and who are labouring unselfishly in the interests of their fellow men. We join them in their earnest longings for stability and quietness in the earth.

Would that their efforts might result in complete cessation of war-provoking strife, during which the work of God might be carried forward to its conclusion. Would that they might be able to bring about some lull in the storm of conflicting interests and ambitions, that there might come even a little time of real peace, affording His church opportunity to finish His work.

But the man who understands the prophetic Word of God knows the outcome of all human efforts toward bringing in lasting peace. The true and only hope of mankind for peace is not in human efforts or human plans.

Consequently our hopes for a peace that will endure do not rest on the proposals put forward, even the elaborate suggestions made by the churches. The great ecclesiastical organizations of the world are not really peace agencies—they only claim to be. The Catholic Church is becoming active in peace movements. It has its own peace society, Pax. Its popes have issued many peace statements. But its influence is not always exerted in behalf of peace. Peace is an instrument it is willing to use when such an instrument serves its purpose. It is quite willing to use war as well.

We do not forget, much as we would like to, that when Italy under Mussolini began the brutal conquest of Ethiopia, the pope was strangely silent. He said no word to stop the massacre of the Ethiopians. According to *Foreign Affairs:* "Even before the war began, all over Italy priests, bishops, and even cardinals were presenting it as a crusade for the conversion of the Abyssinians to the true faith."—*Vol. 18, p. 495.* The unprovoked attack upon the Albanians likewise drew no word regarding peace from the pope.

The foreign correspondent Vincent Sheean in his book, "Not Peace But a Sword," reports that the Vatican sent millions of dollars to the aid of the fascists in Spain, where the power of Hitler and Mussolini was helping to win the war for Franco.

Protestant missionary work, carried forward in Ethiopia when Haile Selassie rules, was throttled when the church-blessed Italian troops invaded the country. Similar work was permitted even in Albania under Mohammedan King Zog. Italian troops stopped it there. Even the communists permitted Protestant worship during the Spanish revolution; but the victorious Franco, blessed by the pope, stifled Protestantism in Spain and confiscated a great store of Bibles belonging to the American Bible Society in Madrid. The New York *Times* of October 6, 1940, printed a dispatch from its London correspondent: "Reports reaching here say the Spanish government has just confiscated 110,000 copies of the Bible. . . . According to information here, the books are to be ground up to make cellulose."

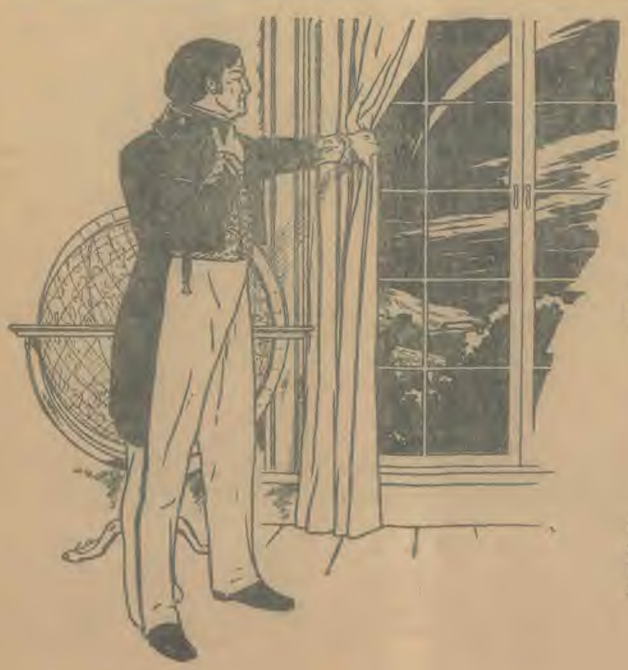
Looking at the records we find ourselves most uneasy at the thought that the Catholic Church may shape the peace.

We are no less uneasy at the thought of the combined Protestant churches controlling the peace. They have proved equally fallible and mistaken. They were swept by pacifism during the interim between World War I and II, and made pronouncements regarding militarism which they would not be happy to have brought to their attention now. They worked diligently to keep the country unprepared, denouncing armaments, and every form of military training. If their counsel had been taken, America would have been in even far worse condition than she was to meet the stunning shock of Pearl Harbour.

No, the church, and all the churches together, are not safe guides in political affairs, or in managing governmental matters. They were never meant to be. And the greatest service they could render a tortured humanity now would be to carry out the divine commission of their Lord and Master to "preach the gospel," leaving diplomacy, politics, and government where they belong, in the hands of statesmen.

Human society is more broken up and turbulent today than ever before. In a stricken and dying world men are reaching out in almost a death agony for peace. And as the many and varied peace plans for world peace are launched one after another, laden with human hopes, we believe it to be the sole province of the churches to point the souls of men to the only way that any human being can reach the port of quietude, peace, and joy; namely, personal peace with God by full surrender to Jesus Christ.

That and that alone is the divine mission of the church in this world. Civil government has been divinely appointed to care for the secular interests of humanity. The church has been divinely appointed to care for spiritual interests by preaching the gospel of salvation. Let it be about its proper business.



Calendar Change Threatens Religion

A Highly Financed Scheme Which Would Abolish Weekly Religious Days, Directly Affecting Catholics, Protestants, and Jews

CARLYLE B. HAYNES

"Periods of time now in use are fixed by movements of heavenly bodies, . . . sun, moon, and stars."

IT is seriously proposed that after the year 1944 there shall be no more weekly holy days in America as we have known them through the centuries. The proposal is receiving widespread approval.

Until the last day of 1944, Sunday, for example, would continue to be observed in the usual way. The last day of 1944, which is Sunday, would be called no day. At the advent of 1945 an entirely different day would replace Sunday should our calendar changers succeed in their designs. It would not be Sunday at all. It would actually be Monday. But it would be given Sunday's name. And those who now hold Sunday as a holy day would be asked to accept Monday in its place.

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re-christen it Sunday, and observe it instead of the real Sunday.

The sponsors of this breath-taking change are known as the World Calendar Association. What they propose to do has been set forth in their propaganda material in the statement that "you will use the World Calendar during the last four months" of 1944.

The claim made that the calendar now in use, the Gregorian calendar, is the same during the last four months of 1944 as the proposed World Calendar, is not true. It is not the same. It abolishes Sunday and Sunday observance.

It does this by taking December 31, 1944, which is Sunday, out of the calendar altogether. Instead of being recognized as Sunday, which it is, instead of being called a Sunday, or being observed as Sunday, it is set aside as an "extra Saturday, December W," and called a blank or zero day.

Instead of going to church that day, Sunday observers would celebrate a holiday, an "extra Saturday." They would go to church the next day, Monday, the 2nd day of the week, now re-christened Sunday, and moved up, on paper, to be the 1st day of the week. They would be asked to keep Monday during all of 1945.

Then Monday, December 31, 1945, would be lopped off, and Tuesday, January 1, 1946, the 3rd day of the week, would arbitrarily be dubbed Sunday, January 1, and moved up to be the 1st day of the week. And during 1946 Sunday observers would be asked to keep Tuesday.

In 1947, by the same process, Wednesday, the 4th day of the week, would be called Sunday, the 1st day, which it would not be at all, but only called so.

Then in 1948, a leap year, an additional "extra Saturday" would have to be provided. It is proposed to do this by calling the last day of June, 1948, June W, another blank, zero, lost day. Consequently, Thursday, the fifth day of the week, would be called Sunday, and made the 1st day, during the first six months of 1948; and Friday, the 6th day, would be called Sunday, and become the 1st day during the last six months.

In 1949 Saturday, the 7th day, under this arrangement, would be called Sunday, and made the 1st day, and observed by Sunday keepers.

In this way Sunday keepers, from 1945 to 1949, would play a game with themselves and keep every day in the week except Sunday, while pretending all the time that the Mondays, Tuesdays, Wednesdays, Thursdays, Fridays, and Saturdays they were really keeping were not those days at all, but were actually Sundays.

Thus the historical Sunday would be detached from its fixed place in the week and set to wandering through the weekly cycle, its own name removed and another name applied. Those who observe it as a religious day would be plunged into hopeless and endless confusion, groping about to discover their lost day of worship.

But the calendar reformers are attacking not only Catholic and Protestant practice in the observance of Sunday but as well the Jewish and Christian practice of keeping the seventh day—by orthodox Jews, Seventh-day Adventists, and Seventh Day Baptists. Since this is a world calendar, the Mohammedan observance of Friday is also included, for the disruption of the week involved in this reformed calendar scheme makes impossible the keeping of any fixed day of the true historical week such as Sunday, Saturday, or Friday. This is what calendar reform means. Its proponents conceal this meaning with scrupulous care. But this is truly the effect of what they proposed.

Let it not be thought that the effort to do this is insignificant and unimportant. Rather is it true that a world-wide and powerful organization has come into existence which has this as its objective. It is spending many thousands of dollars yearly for propaganda to obtain the approval of commercial, governmental, and civic bodies for the World Calendar. It has numerous subsidiary organizations throughout the world working for the adoption of the new calendar.

A supreme effort is being fostered to have this Sabbath-destroying calendar considered and adopted at the peace table. There is legislation in Congress requesting that the President and Secretary of State, or whoever represents the United States at the peace table, recommend this anti-religious, anti-Catholic, anti-Protestant, anti-Jewish proposal as a part of the world settlement to follow the war.

The World Calendar Association, in addition to publishing many pamphlets and books advocating the adoption of the World Calendar, also issues a publication called *The Journal of Calendar Reform*. The association has recently placed thousands of dollars' worth of advertising in great daily papers and is carrying on significant propaganda to attract general attention and approval. In all this it emphasizes only what it considers the commercial, economic, statistical, manufacturing, and accounting benefits of proposed calendar reform, and studiously refrains from discussing or disclosing its religious aspects.

It is proposed that the World Calendar shall take the place of the present Gregorian calendar. Its proponents would have us observe that this calendar divides the twelve months of the year into four equal quarters, 91 days in each, 364 days in all. But as there are 365 days in ordinary years, and 366 days in leap years, they would have these taken care of by calling the 365th day Year End Day, or December W, or an extra Saturday, and have it follow December 30, not to be counted in the calendar, but considered and used as a holiday, a blank day, or zero day. Likewise would they have us provide for the 366th day in leap years, this becoming Leap Year Day, by placing the old February 29 in midyear following June 30 as another extra Saturday, and calling it June W, but not counting it in the calendar, just nonchalantly banishing it as another blank day. They cheerfully tell us that "both December W and June W are the stabilizing days in the calendar —the World Holidays."

By creating a year of 364 days in this fashion, they would then have the first of January, New Year's Day, always fall on Sunday. The first month of each quarter would have 31 days, followed by two months of 30 days each, every quarter having 91 days in all, consisting always of 13 Sundays and 78 week-days.

The advantages claimed for the reformed calendar are avowedly commercial, economic, statistical. It will, we are told—

1. Fix the year in perpetuity.
2. Retain and largely equalize the twelve months.
3. Retain and equalize the half years.
4. Retain and equalize the quarter years.
5. Group the months uniformly within the quarters.
6. Provide 13 complete weeks within each quarter and uniformly group these weeks.
7. Reduce the inequality between months from three days to one day, and establish an equal working month.

These are claimed as "advantages." We ask, "Advantages to whom?" Statisticians, perhaps; very few others. Certainly not to the average man. The majority of people have little or no interest in statistics. The proposed "advantages" represent no benefit for the vast majority of men.

Our starry-eyed calendar reformers overlook or ignore the fact that large segments of humanity work on a schedule of round-the-week activity. Trains run every day, filling stations operate, theatres are open, restaurants serve hungry people, hospitals cannot shut down, public utilities carry on, many branches of government continue work as usual. Indeed, many types of public services are put to extra work whenever holidays occur, particularly when two holidays come together.

Consequently, no juggling of days in a calendar will advantage such groups. Simple accuracy in bookkeeping will require that the blank day be accounted for. This will be done in

most of these essential businesses by simply adding it to the end of December. Thus the entire statistical benefit sought by the calendar reform enthusiasts, of having four equal quarters, will have to be abandoned in practice. It is too much to ask that men stop eating, travelling, telephoning, receiving medical care, or driving their motor-cars just to make perfect statistics.

Most people do not keep statistics. Statistics concern and interest them least of all. Eating, sleeping, working, playing—these are life's considerations, and they are done regularly, usually every day. Bills may be run up by the week, the month, the year, and they must be paid regularly no matter how they are incurred. A pleasant interlude to and diversion from the routine of life is occasioned by holidays—but they have slight statistical value.

It is for this insignificant advantage in the keeping of records, however, that the new World Calendar would sacrifice the uniformity of the *days of the week* in order to establish uniformity of *quarters*. The true identity of the *days* would be lost. Those who feel that they must keep a particular day of the historical week as it has been known to us, would be thrown into interminable confusion and compelled to endure unending hardships and economic disabilities. They would have to keep their own reckoning, maintain their own calendar, be relieved from work on different days each year, and find themselves keeping a day called Sunday one year and Monday another year and Tuesday the next year and so on through all the week.

It will be asked here, Has the calendar not been changed before, and always in the direction of improvement?

And the answer is Yes. The calendar has been changed at different times, without changing the weekly cycle, and usually these changes have brought our reckoning of time more closely into harmony with the precise movement of heavenly bodies.

In fact, there have been many calendars, the Chinese, the Babylonian, the Assyrian, the Egyptian, the Greek, the Roman, the Maya. They have become more and more accurate in proportion as they have been based on the movements of God's great celestial timepiece.

The Gregorian calendar, the one now in use in the whole civilized world, came to us by way of Babylonia, Palestine, and Rome. The Roman calendar, which legend declares was introduced by Romulus, had 304 days, divided into 10 months. As this Roman calendar was far out of line with the solar year, having only 304 days rather than 365 plus, two months were finally added, and the number brought to 12, with a total of 354 days, or a lunar year. Every second year an intercalary month, alternately of 22 and 23 days, was placed between the 23rd and 24th of February.

Because this calendar was not adjusted to the actual movements of the heavenly bodies, there was a continuous shifting of the seasons. The result was that by the time of Julius Caesar reform was imperative. Consequently, Caesar called to his aid an Alexandrian astronomer and mathematician, Sosigenes, to analyze the Roman calendar and recommend necessary changes.

Sosigenes discovered that the calendar was 80 days out of line with the seasons. So Caesar, by decree, put 445 days into the year 46 B.C., and it came to be known as the "year of confusion." He abolished the intercalary month and inserted 67 days between November and December. By so doing he brought together the civil and natural years. He determined that the ordinary year should contain 365 days. He then made provision for leap year by adding a day every fourth year. Thus the Julian calendar, based on a year of 365¼ days, was introduced by, and named for, Julius Caesar.

This calendar was used for fifteen centuries after Christ in practically the entire civilized world. It was not, however, an accurate calendar. It assumed the length of the solar year to be 365¼ days, whereas it is eleven minutes and a few seconds less than that. This does not seem to be a great error, but in the course of years it accumulated. In the beginning of the sixteenth century after Christ, the vernal equinox, instead of taking place on March 21, as it had when the date for Easter celebration was fixed in A.D. 325, was occurring on March 11.

As long ago as the thirteenth century, astronomers began to write about the inaccuracy of the Julian calendar. Some of the countries of Europe desired to take action looking toward a reform of the calendar. But nothing was done for a long time, because leadership and agreement are necessary in order to establish a revision of the calendar which would bring about uniformity in all countries.

At last the sympathy and interest of the pope was enlisted. Under Gregory XIII the calendar was changed. He published a bull, dated March 1, 1582, adjusting the calendar count, so that what would have been reckoned Friday the 5th of October, 1582, was to be reckoned the 15th of October.

The day was still Friday, but instead of being Friday the 5th, it was Friday the 15th. There was no difference in the month. There was no difference in the day of the week. The difference was in the day of the month. It was the 15th instead of the 5th. That is all.

Spain, Portugal, and Italy adopted the new Gregorian calendar at once. A little later in the same year, 1582, France adopted it, by calling the 10th of December the 20th. The Catholic states of Germany adopted the new calendar in the year 1583, but in the Protestant states of Germany the old style, or Julian calendar, was adhered to until the year 1700. In that year the Protestant Low Countries, as they were called, or the Netherlands, adopted the new calendar. They were not friendly to the Papacy, and hence were slow to accept anything which they considered came from the pope.

England did not adopt the new calendar until the year 1752. Sweden and Denmark accepted the new calendar about the same time as the Protestant states of Germany. Russia, Rumania, Greece, and Turkey waited until the time of the first World War to make the change.

During all this time, when some of the countries were reckoning time under one calendar and some under another, the days of the week were identical in all countries. When it was Saturday in Spain and Portugal and Italy, it was also Saturday in England. When it was Monday in Russia, it was Monday in Germany. What the encyclopedia called the "unalterable uniformity" of the week was not affected by all these calendar changes.

The periods of time now in use among men, the grouping of the days together into months and years, with one significant exception, are fixed by some movement of the heavenly bodies, the sun, the moon, the stars.

The year is fixed by the time it takes the earth to complete one circuit of the sun. The month is suggested by the revolution of the moon about the earth. The day is determined by the rotation of the earth on its axis. But there is no movement of heavenly bodies, of the sun, or moon, or stars, or planets, which determines the length of the week. God ordained a special, a particular, arrangement, a divine rule of exact measurement, never broken or altered or abolished, from that time to this, to fix the length of the week.

There is nothing in nature suggesting a grouping together of seven days. No celestial body circles the earth, or sun, or moon, or stars, or any planet, or is circled by these, in seven days. God grouped seven days together and fixed this grouping into an unalterable system, which has not been affected by all the transitory systems of measurements and calendars adopted by men.

THE ORIENTAL WATCHMAN