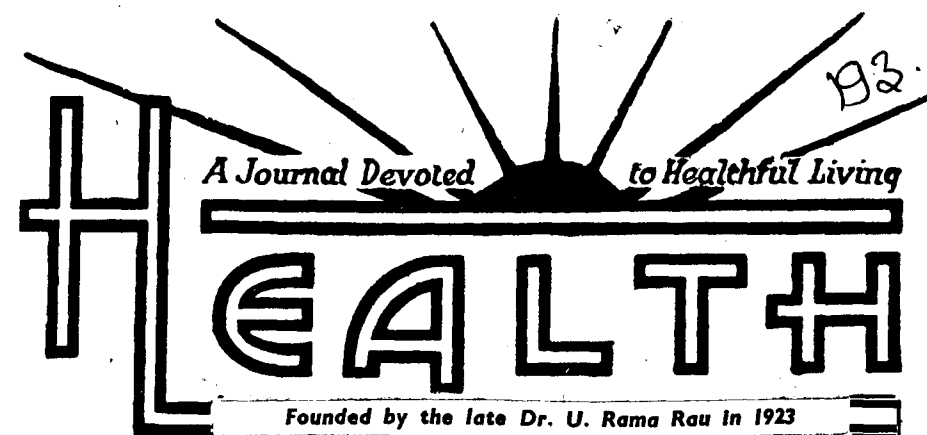




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CHILD-EDUCATION THROUGH HEALTHY CINEMA FILMS

THE annual report of the Children's Film Society for last year reveals that some progress has been made in the direction of producing films specially adapted to the needs of the children of this country. We are indeed glad to know that almost the first Indian film for children, won the first prize at the International Film Festival held in Venice in the Children's Section. But the short note found in the same report that the children's cinema started at Delhi had to be closed down for want of suitable films is indeed depressing! The Union Government has frequently stated that private enterprise in this direction will be suitably acknowledged and rewarded; but the response has obviously been very poor. In the circumstances

the Central and State Governments should pioneer such ventures with the active co-operation and guidance of enthusiastic educationists, public health and social workers with imagination and a *flair* for such work. Cinema producers will, we are sure, then take up the work enthusiastically and well.

Children form an impressionable section of the audience in cinema shows and so the cinemas can be put to very effective use in the promotion of child-welfare. They will easily acquire a sense of social consciousness through the medium of suitable films, which will form essentially valuable adjuncts to text-books and class lessons.

In this context we would like to tell producers that a children's film must be one that

really interests and educates them. The didactic element is no doubt important, but the entertainment factor should also be kept prominently in view all the time. The factual background of the films should be realistic and correct in every detail. The school child, as we all know, takes his teacher quite seriously, and it is often very difficult for a harassed parent to convince his child that even Homer may nod and the teacher may make an occasional slip. So implicit is his faith in the teacher. Therefore as Shri Y.B. CHAVAN, Chief Minister of the Bombay State, wisely said some-time ago we should guard against one thing, namely, never to put adult thoughts and words in the mouths of children, for it will make them precocious and unsuitable citizens when they grow up.

The child has the gift of hilarious laughter in abundance, which wanes with advancing years in most cases, and all good education should aim therefore, at encouraging the growing child to cultivate and maintain a strong sense of humour all through life.

The States' Governments are

becoming more and more conscious of the children's needs in the matter of visual education. Prime Minister Shri NEHRUJI inaugurated in Madras a children's cinema in the Old Assembly Hall during his visit to Madras in December last. More of these must be brought into existence as soon as funds become available. In the meanwhile the existing cinema houses should be utilized for screening children's films at frequent intervals. The States should help the Children's Film Society of India with adequate finances and exempt children's films from the entertainments' tax. The charges for admission should be nominal.

There can be no dearth of themes for films in our country, with its age-long cultural tradition and humanistic outlook. Pictures should suit the varying needs of different regions of the country. Special efforts should also be made to take these films into rural areas where 80 per cent of our Indian people live. Really good films of universal interest can be made available in the different languages of the country by the method of "dumping."

Patient-Doctor Relationship

Avoid self-diagnosis. Remember that the purpose of the doctor's examination of you is to determine facts, not to substantiate your fears; when you suffer from symptoms of possible disease, go to your doctor with an open mind. If you have any fears, keep them to yourself. Let the doctor have an open mind, too, in interpreting your history and the results of your examination. Don't try to interpret the doctor's facial expression or his manners. The doctor's expressions may be quite irrelevant to your case. If laboratory tests are recommended don't get alarmed; they are needed only to help in diagnosis; don't get frightened if the tests reveal minor abnormalities for they often occur without causing trouble. Believe your doctor, more than anything.—(Today's Health, July 1957).

THERE IS NO UNANSWERED PRAYER

In the things which do not happen there are often hidden miracles

MARGARET BLAIR JOHNSTONE

○

I HAVE yet to meet the person, no matter how deeply hurt, who does not find comfort (in the true meaning of the word, for "comfort" means "with strength") once he grasps this fact: There is no unanswered prayer. True, God cannot always answer yes. But He does answer.

Many people no longer pray because of what they call disillusionment. At some time in life they may have prayed for the health of a loved one, for strength to fight some weakness in themselves, or for success in landing a job. They have watched the dear one die, they have wakened with another hangover, or failed to get the job. "What's the use of praying?" they say. "God did not answer."

We seldom realize that disillusionment, the freedom from false belief, is the healthiest experience possible—particularly for those who have considered God a kind of Santa Claus who, by prayer can be plagued into giving us what we want.

What then is prayer? One of the most helpful definitions was stated ages ago by Clement of Alexandria: "Prayer is conversation with God." So few of us understand prayer because we don't make it conversation with God. We deliver an ultimatum.

"Black despair will scarcely clutch and hold for long if we can talk it out with a friend who understands," a philosopher once said. This is the secret of

the kind of therapy which comes to the troubled mind that finds a counsellor to whom all things can be poured out freely. And this is the key to the healing that the broken heart finds on turning to the Counsellor unto whom "all hearts be open, all desires known, and from whom no secrets are hid."

An old hymn says: "Prayer is the soul's sincere desire, uttered or unexpressed." Many who would not think of kneeling in church do not hesitate to recline in a psychiatrist's office—though increasingly counsellors agree with Dr. William Sadler, who says in *The Practice of Psychiatry*: "When we set ourselves to the work of collecting or re-collecting the scattered pieces of ourselves, we begin a task which, if carried to its natural conclusion, ultimately becomes prayer."

There was a scientist once who thought prayer was humbug—especially the kind of praying that involved making a pilgrimage. Then he fell ill, came close to bankruptcy. Many of his experiments failed.

But, one day, he made the pilgrimage—mainly to get away from home. At the shrine he said to himself: "If I were not an agnostic, I might experiment with this superstition." Convinced himself that he was going through the motions out of idle curiosity, he started the ritual.

Halfway through, "Now, if this were not folly, what would I pray for? Health? Money?" He continued the ritual, then suddenly he cried, "Oh God, I beg you. Enlighten my mind so that I may invent something very great to further human knowledge!"

Amazed, the scientist stood in the silence. So this was his desire of desires. Knowing it at last, Galileo began experiments which led to the invention of the telescope.

Prayer is indeed the soul's sincere desire—and few of us find our miracles, because we cannot discover what we want most. And sometimes we never start to find out until our whole world crashes and we are forced to look at life from a new angle, one which we perhaps see for the first time only when God says "No!" When disappointments come, there are two things we must question before we question God or His purposes. No matter how great our longing or how fervently we pray, when God says no, we must question our desires and ourselves. Many times, we should ask not what is wrong with our prayers but what is wrong with us.

We would not be realistic, however, unless we faced the fact that while our desires may be right, and we ourselves fully worthy of receiving that for which we pray, still God may say 'no'. Why?

Sadly enough, very often only time alone can give us the reason. But if, along with the cry, which comes to all of us sooner or later: "Why, God, why?".....we can give the simple affirmation, "There is some reason, and one day I shall find it," we can save ourselves untold heartbreak.

Besides *no* or *yes*, there is a third answer God often gives us when we pray. Time and again, when I used to ask my mother for some special gift, "We'll see," she would say, "just be patient and do all *you* can do about it, and then we'll see."

So I think God answers us—many times. But other times what happens depends, ultimately, on how much we work with God—with any and with all of the manifold powers through which He works. Thomas Edison said, "We don't know the millionth part of one per cent about anything. We don't know what water is. We don't know what electricity is. We don't know what heat is. We have a lot of hypotheses about these things, but that is all. But we do not let our ignorance about these things deprive us of their use."

So with prayer. We really don't know the millionth part of one per cent about it. But what we do know is enough to enable us to use it, and through it, to let God use us.—(*Better Homes and Gardens*, via *Reader's Digest*, January 1958).

Common Problems in Infant Welfare

(Concluded from p. 7 of HEALTH for Jan. 1958)

III

Miscellaneous conditions.—

1. *Umbilical polyp*:—Polyps are frequent in young infants, and mothers seek advice because of the moisture and discharge from the navel. Touching with copper sulphate or silver nitrate stick usually suffices to clear up the polyp.

2. *Umbilical hernia*:—Most of these herniæ will resolve spontaneously and need no treatment (Woods, 1953). Large herniæ may respond to properly applied strapping but if no improvement occurs by the time the child is about one year old, operation may be required.

3. *Circumcision*:—This is rarely called for except when there is any obstruction to the flow of urine. Attempt at stretching the foreskin with sinus forceps is painful and quite unnecessary, but unfortunately too commonly practised. In the older infant, a neglected napkin rash complicated by sepsis may cause severe scarring of the foreskin so that retraction then and later may be impossible. Circumcision is then, of course, necessary.

4. *Squint*:—Infants in whom a squint persists after the age of six months or appears after that age should always be sent for an ophthalmologist's opinion. Delay may be dangerous.

5. *Sticky eye*:—In infants during the neonatal period, a watery or slightly muco-purulent discharge is common. Usually

this clears up spontaneously or after bathing the eyes with sterile warm water. Especially in the muco-purulent form, is a blocked naso-lacrimal duct likely to be the underlying cause, and this should be tested for by gentle expression just below the inner canthus of the eye. If a blockage is present, a further opinion should be sought. It is always a mistake to persist too long with sulphonamide or antibiotic eye-drops. Apley *et al* (1954) have drawn attention to the frequent association of snuffles in the newborn and conjunctivitis.

Some causes of parental anxiety.—A common cause, especially of maternal anxiety, is the belief that the child is underweight, especially when compared with similarly-aged children of friends of the mother. Much of this anxiety springs from the too frequent weighing of the baby so that a weight-complex is set up. Infant welfare centres have now largely abandoned the regular weekly weighing of babies in favour of longer intervals and as a check on progress. When such a fear of underweight is expressed by the mother, the child should be thoroughly examined and an explanation given of the wide limits of normality in development. Mere reassurance without examination will not do.

Closely allied to anxiety about the purely physical aspect

Heaven is nearer the earth to those who are pure in mind and who are freed from doubts.—(*Tirukkural*).

of the child's progress is lack of parental appreciation of the stages and levels of development of a child's capabilities. Sometimes it is found that parents are disappointed that their child is not up to the standard they have set for him. *For example*, they expect him to be able to do something which is beyond the capabilities of his age. Much demand on a doctor's time is made in explaining what is to be expected of babies of such and such an age, but it will be time well worth spent.

In these days of small families, over-anxiety on the part of the mother about her baby often occurs. She is afraid she cannot feed him, afraid that something will happen to him suddenly and so she is constantly tiptoeing to the cot to see that he is all right; she does everything for him when

he wants to do things for himself, such as his early attempts at self-feeding. Such a mother tends to be tossed to and fro, seeking advice in this article or that book on child management, becoming all the time more worried. Sympathetic hearing of such a mother's troubles is necessary and this with quiet firm reassurance will help her considerably.

Conflicts with grandmothers are frequent sources of anxiety. The grandmother is always referring to her way of bringing up the child, a way which clashes with the mother's way. The grandmother's co-operation must be sought. Sometimes similar situations arise with the landladies of the house in which the young couple and child reside.—(*Mother and Child*, March 1957).

Handling Visitors is an Art?

The Late Geoffrey Dawson, editor of *The Times*, has perfected a technique for handling visitors. His room had two doors. When you entered, you found him standing in front of his desk, his whole attitude that of one who has been unable to keep himself from bounding from his chair and rushing forward to meet you. Already touched and impressed, you were further overwhelmed by the warmth of his greeting and the voluble geniality of his conversation as he put his hand on your shoulder or took your arm.

The effect was practically hypnotic, and in this state you were scarcely aware that with one arm across your shoulders, the editor was with the other hand opening the door at the far end of his office and pushing you gently into the corridor, bidding you a warm farewell after an interview which had lasted approximately 80 seconds. Nothing had been promised, nothing decided; but for several hours you certainly felt that you had accomplished something or other.—(Claud Cockburn, in *Times of Trouble*, Hart-Davis) via (*Reader's Digest*, October 1957).

Living with those who do not agree with you is like dwelling with a cobra in the same hut.—(*Tirukkural*).

Even thin gruel is ambrosia to him who has obtained it by his labour.—(*Tirukkural*).

Don't Pamper

YOUR HEART

JAMES Y. NICOL

DR. WHITE, the eminent heart specialist, refuses to believe that hard physical work causes heart disease.

Surveys show that only two per cent of cases of coronary thrombosis (a blocking by a clot of one of the vessels which supply blood to the heart muscles) are associated with unusual exertion. More than half of all attacks occur while the victim is either resting or asleep.

Dr. White attended President Eisenhower. The specialist maintained that the President's devotion to golf—he played twenty-seven holes the day before his attack—would delay rather than accelerate the attack.

The heart, Dr. White believes, is too much feared and coddled simply because it is the most immediate vital organ.

"It is wrong to believe that a person with a heart ailment must stop all work and die quietly," he said. "Moderate activity is just as necessary for a heart patient as for any-one else. What are our muscles for? Not so we can simply sit around in an armchair. I am afraid we are becoming too soft."

Dr. White added: "I do not say that persons who have suffered a coronary thrombosis or angina pectoris (an ache in the heart muscle itself due to short-

age of oxygen) should start chopping down forests. They must be careful.

"If a healthy man of forty isn't in condition to chop wood he should not go at it strenuously the first time out. He should get himself in condition gradually. And then he should stay that way."

No one has found the chief cause of heart attacks though the American Heart Association has spent thirteen million dollars in the past five years on research. But it is known that these ailments afflict one person in sixteen.

They kill more than all other diseases combined. Coronary thrombosis takes half again as many lives as cancer. High blood pressure, rheumatic fever and hardening of the arteries (arteriosclerosis) cause ninety per cent of heart disorders.

"In the case of the coronary arteries," says Dr. White, "the hardening and thickening of the artery wall, the narrowing of the tube and the decrease in the size of the blood stream that flows through it often begins as atheroma. This consists of the laying down of fat in the inner lining of the wall. In time this deposit tends to clog the artery much as rust or scale clogs a water pipe."

Old age was once regarded as the chief cause of sclerosis but younger men occasionally suffer from it.

Again, scientists have learned that the death-rate in America from heart attacks is far higher than in Asiatic and African

countries where the native population often is poorly fed. In European countries where food was severely rationed during World War II the death-rate dropped sharply.

"Some people suspect that our rich diet is a factor," Dr. White commented.

A typical case of coronary thrombosis follows this outline:—

Mr. Brown, a business executive in the middle fifties, had eaten an unusually hearty dinner after a long day at his office and had retired early, feeling tired but otherwise well. Some time after midnight he was awakened by a sensation of heavy pressure under the breast-bone. It grew more severe though Mr. Brown took baking soda and drank hot water.

He felt faint and broke out in a cold sweat. Unable to endure the pain, he agreed to have his wife call the doctor who arrived at 1 a.m. and gave him two hypodermic injections of morphine.

He dozed fitfully through the night and the pain continued until noon. After that he was exhausted and a little feverish in the evening. The day after that he felt much better despite a higher temperature. The fever lasted altogether for four days but he had no more pain.

Within a week he felt perfectly well but the doctor insisted that he remain at complete rest in bed for another two or three weeks to ensure an adequate healing of the injury to his heart. For the first two weeks he was on the danger list and lay very

still except for some gentle foot exercises.

Thus there passed tediously two months of convalescence, and it was not difficult to induce Mr. Brown to take one more month, his third, to complete his rehabilitation away from home, getting mild exercises and restoring his *morale*, which had been badly shattered by this unexpected disaster. He ate lightly, lost some excess weight, and wisely did not resume the tobacco which he omitted the first day of his illness.

The patient resumed his work slowly, but within a month was back in the swing, though avoiding long hours and the more severe strains, both physical and mental.

Life may continue uneventfully for many years. Many persons do quite well, much better, in fact, than was thought possible twenty-five years ago when the condition began to be distinguished from "acute indigestion" with which it had been so long confused.

Out of every 100 heart cases, fifteen prove fatal within a few weeks. Most deaths occur in December, January and February.

Said Dr. White: "We take our holidays at the wrong time from a medical standpoint. Business slackens most in the hot weather. We need rest most when the work is heaviest. So the cold weather months are the best time to get away from it all.—(Condensed from *The Star Weekly*, for *English Digest*, May 1957).

SO YOU'RE GOING TO STOP SMOKING?

HENRY LINK, Ph.D.

SOONER or later, nearly every cigarette smoker discovers that he is not smoking by choice but by habit, and that the habit is harmful. So he tries to break free from it, but finds that he doesn't know how to. Sometimes half-heartedly, sometimes earnestly, he wrestles with his addiction—but in vain. His self-control has been perilously undermined by a mere mechanism of habit.

For years he has been practising daily that mechanism, without realizing that it was becoming automatic, that he was perfecting a whole chain of habitual motions, an irresistible nervous-muscular process.

It begins with lifting the packet, extracting a cigarette, tamping one end, placing it between the lips, striking a match, inhaling the first gulp of smoke and so forth, until the stub reaches the ash tray. Every cigarette consumed involves the same chain of actions and reactions, which seem to set themselves in motion and go on automatically to the end. Often the smoker is not even aware of them. Like an old-fashioned clock wound up to strike, he is set to go and set to finish dozens of times a day. Like a robot, he moves at the command of an invisible master.

Is there anything he can do about it?

Behind that question lies an important lesson in psychology. For the habit of cigarette-smok-

ing is only a familiar instance of the psychology of all habit-forming and habit-breaking.

During the last five years the consumption of cigarettes in Britain has increased from 79,000 million to 94,000 million a year. Today about 70 per cent. of the men and 47 per cent. of the women are consistent and confirmed cigarette smokers. This habit of smoking may be viewed as symbolic of a fundamental trend in modern civilization. That trend is the increasing frequency with which individuals permit themselves to become the *creatures* of their habits rather than the *creators* of their environment.

To find out what factors enter into this deep-rooted problem of character weakness, a psychological survey was completed in the U.S. before the war, based on a sample study of 1,000 men who were or had been inveterate smokers. Of this group, 145 had stopped smoking. Of the remaining 855, nearly half had stopped at one time or another but had been unable to give up the habit permanently. While some had abandoned hope of success, 28 per cent still wanted to stop. *But they could not.*

The reasons they gave were generally as follows:—

"I haven't the necessary will power."

"Can't do without them."

"I'm too weak."

"I stopped once, but I can't any more."

"Why can't I? That's what I'd like to know."

Here is a sad commentary—yet it is typical of the millions of people who today are still confessing their inability to conquer this purely mechanical habit.

The majority of the 145 men who had succeeded in stopping permanently, and many of those who had stopped temporarily, were quick to announce their satisfaction.

"I slept more soundly and didn't cough."

"Better taste in my mouth."

"My sense of smell returned acutely."

"Had more pep and a better appetite."

Even more enthusiastic were comments such as these:

"I can't say how, but I feel better all over."

"Got a tremendous kick out of being able to stop finally."

"Gave my entire morale a great boost."

Here we have the antithesis of the statements from men who could not stop. Note how the triumph over a confirmed habit gave to many persons a sense of well-being and of strengthened character.

Psychologists will agree that no single formula is applicable to every situation. Most of them will also agree that the formula laid down by William James, the great student of habit, is basically sound. His principles may be summarized as follows:—

Make a strong resolution and base it on as many sound reasons as you can muster.

Never permit an exception until the new habit is firmly fixed.

Re-affirm your resolution from time to time, marshalling new reasons in support of it.

In the survey of the 145 men who had stopped smoking permanently and of the 366 who had stopped temporarily, it was found that they had relied on three major methods. The most common was the method James advocated—to give up smoking at once and completely, with no concessions. The second method relies on substitutes, i.e., a pipe, cigars or sweets. The third method is the well-known one of cutting down on cigarettes gradually.

Although the *abrupt* method was more widely used by the men in the survey than the *gradual* method, the percentage of those who succeeded in stopping permanently was considerably higher among those using the gradual method. My method of *interruptions* is a gradual method, with this important difference: it systematically practises smoking in ways which will disrupt the smooth flow of the habit chain. It breaks a monotonous series of automatic activities into single, unusual acts, each of which serves as a warning signal to the mind.

All such successful experiments are in sharp contrast to the expressed despair of the many who consider themselves helpless victims of the cigarette. The control of this specific habit may not seem to be of any consi-

derable social importance. But unhappy experience.

The person who admits, openly or tacitly, his slavery to habit mechanisms, has lost the sense of self-mastery, and by the same token has become a less responsible and effective member of the community.—(Your Life, via Reader's Digest, January 1958).

CHANGED PERSPECTIVE ON T.B.

Doctor into Patient

JAMES KIRKNESS, M.R.C.S., L.R.C.P.,

(Doctors get ill like everyone else. This doctor compares modern chest hospitals with the ones he knew as a young medical student)

EVEN the best doctors sometimes fail to diagnose their own complaints. For, as a profession, doctors tend, in spite of what they preach, to carry on too long when illness strikes them.

It was so with me in the summer of 1954. I had been growing steadily more tired. At last I began to find myself lying down on my bed at every opportunity. And I was losing weight.

One Sunday morning in August I coughed up a little blood. The horrid truth dawned on me that I was really ill. Two painful possibilities confronted me. Pulmonary tuberculosis and cancer of the lung. I plumped for T.B. An X-ray showed it to be just that. My chest specialist ordered me away and I began a course of treatment in what was once a sanatorium and is now a modern chest hospital. A very different type of institution, I assure you.

The old-fashioned rest home atmosphere was gone. The hospital, the latest of its kind, was equipped with the most up-to-date surgical theatre. All antiquated misconceptions had been bundled overboard. For example, the martyrdom of sleeping in the open or at an open window in all weathers was ended.

I found myself along with seven other doctor-patients in a wing which the staff had christened Harley Street. Soon after admission, I was weighed, examined and put to bed, and my treatment was mapped out for me. Chemotherapy consisted of a daily jag of streptomycin with isoniazid by mouth. This was continued for three months and then the streptomycin was reduced to every second day and "P.A.S." was substituted for the isoniazid. At this stage, I was allowed out of bed to move around a little, but always in my dressing-gown. To dress for

tea was a later milestone in my recovery.

This was my treatment. Younger patients usually undergo from four to nine months or a year of chemotherapy and building-up for operation. Rather like fattening for the market.

There are several types of operation: thoracoplasty and lobectomy are two well-known ones. The appropriate one is chosen by the hospital's team of top-grade specialists. Physician, thoracic surgeon, and anaesthetist, each indispensable to the other. There were over seventy patients in this hospital.

Weighing day was a social occasion. Bedridden patients were allowed to leave their rooms and congregate in the weighing-room, exchanging news and views on this and that. A change from listening to the radio.

As the months passed, I was gradually allowed up more and more, until at length the dining-room was reached, then the lawn and grounds. Finally I went for walks in the country.

The more advanced patients ran a club for Sunday concerts, and put on playlets in the hospital. We also had a putting-green, library and quite a good

billiard-room.

At last, the day arrived for me to leave the chest hospital and I went back home to have my chemotherapy continued by the district nurse for a few more months. I also kept in touch with the local Tuberculosis Officer. Altogether I spent five months in hospital, but most of those who have an operation are there from ten months to a year or two.

What struck me most forcibly as a patient and a doctor about the modern institutional treatment of tuberculosis, was the entirely changed technique from just a few decades ago. There was all the time a firm sense of purpose as well as an infallible conviction of ultimate success.

On admission to hospital I weighed 8 st. 10 lb. and I am now 11 st. and feel fitter than I have done for many years. Although my first X-ray was graver than they let me know, I resumed general practice eighteen months ago.

No one who contracts this once dreaded malady need be alarmed about the future. Provided he or she catches the disease in time, cure nowadays is almost certain.—(*Family Doctor*, January 1958).

Domiciliary Treatment of T.B.

Hospitalization is essential for surgery only; with anti-microbials home treatment in almost all cases can now be rendered as efficacious as institutional treatment, if economic distress in the home is eased somehow. In the under-developed countries of the East, the emphasis in anti-tuberculosis programmes should be on domiciliary service with the free issue of antimicrobials and financial help to the needy, supplemented by hospital beds for a small percentage requiring surgical procedures.—(Dr. B. K. Sikhand, XIV T.B. Conference, 1957).

CAN SCIENTIFIC MAN SURVIVE?

'More important than reaching the moon is learning how to live on earth,' says

BERTRAND RUSSEL, O.M.

THE two Sputniks have astonished the non-scientific world, although competent physicists have been well aware for some time that such projectiles would be possible, if not now at any rate within a few years.

The general public in the West has had a twofold reaction: One of admiration for technical achievement, and the other of terror caused by the discovery of Russian scientific supremacy.

There is no knowing what science may achieve, but the difficulties are certainly much more formidable than those involved in launching projectiles to these distant destinations. I am afraid that, at any rate for several centuries, we shall have to be content with our own planet as the only habitat for human beings.

If this is true, as I believe it to be, we are faced with a very grim question, namely: Can scientific man survive, or is the mixture of advanced knowledge with primitive undisciplined passion so unchangeable as to make human survival improbable?

I do not know the answer, but I do know that statesmen and the general public are not taking enough account of the danger.

Consider one single matter: the expenditure of public money on scientific and technological research during the past eighteen years. What has been the purpose of this expenditure?

About 99% of it has had for its aim the perfecting of methods of mass extermination.

If we may judge by the actions of great States, and by the public opinion which supports these actions, it is a characteristic of *homo sapiens* that he is more anxious to kill his enemies than to stay alive himself.

I know that almost everybody will repudiate this statement and say that it is libel on human nature. I should reply that we must judge men by their actions rather than by their professions, and that one of the surest tests of a man's genuine desires is what he thinks it worth while to spend his money on.

This test, when applied to human behaviour since nuclear fission became possible, fully substantiates a very gloomy view as to human desires and purposes.

If mankind is to survive in the new era of science and technology it will be necessary for both individuals and Governments to value and encourage other aims than those which have hitherto been most praised.

Who are the heroes whom we in England most admire? The answer is easy. Compare the height of the Nelson monument with the height of statues to Shakespeare, Newton, or Darwin. This will give you the exact proportion in which we consider the extermination of enemies

more important than services to mankind as a whole.

This is not a British peculiarity. It is a trait in human nature, unfortunately transmitted from our savage ancestors.

Knowledge is power, but it is power for evil just as much as for good. With every increase of scientific knowledge, man's power for evil is increased in the same proportion as his power for good.

The really important question raised by modern technology is, therefore, not "will it be possible for man to inhabit other planets," but "will it be possible for man to continue to inhabit his own planet?" I think that a happy answer is possible only if we can learn to think in terms of the welfare of mankind, and not of this or that particular nation or group. This is difficult, but perhaps not more difficult than the discoveries of nuclear physics.

I do not regard this as a pessimistic conclusion. Moral progress has been occurring throughout recorded history. We do not sell our parents to neighbouring cannibals when they become too old for work. We do not indulge in hecatombs of human sacrifice as the Aztecs did. The British of the present day are horrified by the penalty of being hanged, drawn, and quartered, which was cheerfully inflicted

on criminals not so very long ago.

It is possible, I think, that the Governments of East and West, alike, may decide that their enmity is suicidal, and may come together in a determination to make science the servant of man rather than of homicidal lunatics. I do not think either statesmen or the general public have at all realized the immense and hitherto unparalleled happiness that is now possible for the human race if it decides to pursue its collective welfare rather than damage to some hated group.

This demands a morality which will be new only in the sense of being acted upon. As an ideal, it is not new, but very old. It has been preached for countless centuries by sages and religious leaders, who have been highly honoured after being put to death.

Though not with complete confidence, I hope that men may learn to permit themselves to be happy, even at the cost of enduring the happiness of those whom they have hitherto hated.

If this lesson can be learnt in time, science can lay the foundation of a new Golden Age. If it cannot be learnt, every increase of knowledge will be only a step towards ultimate and complete disaster.—(*The Sunday Times*, London, via *World Digest*, January 1958).

Internal Hatred

Fear not foes who say they would cut like a sword. But fear the friendship of foes who seemingly act like relations.—(*Tiruvalluvar*).

REARING OF CHILDREN

(Sleeping Without A Pillow)

WHETHER or not a child should have a pillow is one of those questions that keep on cropping up and there appears to be no unanimity about the opinions held in this matter by different parents. A leading pædiatrician of London has the following authoritative advice to give.

"Grandparentship is worth a treatise from Stephen Potter in his series on lifemanship. It is quite remarkable how parents turn into grandparents, generation after generation, and so often succeed in getting one up on their own children in the end.

This pillow business is a well-known anxiety for mothers. They are generally made to feel in the wrong whatever they do about it, so I would not worry. Little girls grow up just the same whether they have a pillow or not.

If you give a baby a pillow everyone will be horrified and say that he will be suffocated. Babies certainly should not be given soft bulgy pillows, but a small *firm* one is safe enough. There is no real point, however, in giving a baby a pillow at all. He will be perfectly all right without one.*

Toddlers, brought up from their earliest days without a pillow, sleep perfectly well, and are obviously comfortable, even if, to a grown-up eye, they do

not look as comfortable as they should. This, of course, is because as you get older pillows become more and more of a necessity and it is difficult to imagine the days when you could sleep cheerfully without one.

Sleeping with a pillow, or sleeping without a pillow, has no effect, good or bad, on the way a child's spine and shoulders develop. A small saving in expenditure and washing is to be made by not giving children a pillow till they ask for it. The commonsense thing is simply to wait until then.

At the same time, there is no point in annoying grandparents over a trifling thing like a pillow for a two-year-old. If it would make them happy it might be best to give in gracefully and get Susan a rather firm flat one.—(*Family Doctor*, June 1957).

[NOTE:—In India babies and infants are usually allowed to lie on a board or mat, without any pillow at all, as it is the common belief born of experience—that the child's head should lie on the bare board or mat, without any pillow so as to get the proper shape and form without being uncouth or oval. There is certainly a great deal of truth in this. Unfortunately at the present day well-to-do parents provide soft silk quilts and bulgy pillows to their babies to show off their affluence. This is not correct. The hard wooden board of the cradle or cot, with a soft cloth or a rug on the floor to lie on, without a pillow is the traditional Hindu practice and is the ideal.—Ed. HEALTH].

Smoking

Smoking in a foodshop is now an act which is punishable by a fine under the New Food and Hygiene Regulations of Great Britain.—(*Military Medicine*, Jan. '58).

The VIRTUES of TURMERIC

(*Curcuma Longa* N.O.: Scitamineae)

A Public Health Worker of 45 Years' Standing

TURMERIC is an excellent and valuable tuber which has aromatic, stimulant, tonic carminative, and antiseptic properties and therefore of immense use to man. It was, till about 25 years ago, an indispensable article in the Hindu woman's daily toilet. Unfortunately with the impact of western civilization and the advent of the new toilet preparations of doubtful (and positively harmful many of them) value flooding the markets our women have neglected turmeric as an essential article of daily toilet use; They have taken to costly pomades, powders, creams and depilatories. Turmeric is known by the following popular names in the vernacular languages of India:—

Skt.: Rajani; Haridra; Gauri. *Eng.*: Turmeric. *Hind.*: Punj and Dukni; Haldi. *Kashm.*: Lidar. *Bengali*: Halud. *Mahr.* and *Kon.*: Halad. *Guj.*: Halder. *Halada.* *Pers.*: Zard choba. *Arabic*: Zirsud; Kurkum. *Telugu*: Pasupu; Haridra. *Tamil* and *Malayalam*: Manjal. *Canarese*: Haldi; *Arasina.* *Burmese*: Tanum. *Malay*: Kooneit. *French*: Curcum long.

It is extensively cultivated all over India; in Bombay and Madras States two or three varieties are grown one used for dyeing and the others for eating purposes. Carotene the precursor of vitamin A, is present in abundance in turmeric.

In the Ayurvedic, Unani and Siddha systems of medicine turmeric is extensively used, as powder, paste, ointment, essential oils, lotions, inhalants and confections in various diseases,

with great beneficial effect. I propose now to indicate in broad outline its outstanding merits. Used in culinary preparations (savory dishes and pickles) it adds to their flavour, and tempers the *hotness* of the curries, and definitely provides the essential food factor, Vitamin A (as carotene). It is a good healer of wounds and so helps in the healing of ulcers, perhaps also in the prevention of inflammations in the gastric tract. As an external application it is invaluable in various skin diseases. In smallpox a coating of turmeric paste with or without *neem* paste, facilitates scabbing, and relieves the itching. In conjunctivitis of the eyes, it was a long established practice, to use with considerable benefit, a piece of fine, clean, white cloth soaked in turmeric solution, to wipe the eyes and apply it to the closed eye to relieve itching, pain and congestion, and also to ward off flies and gnats which usually pester an inflamed eye. This salutary practice has been given the go-by. Costly ointments with antibiotics, have come to be applied every two hours—of course with benefit but involving greater cost, which poor patients cannot afford.

This short account on the manifold benefits which a cheap simple easily available article of diet can confer was prompted really by an article in Tamil by Bavannah in the *Catholic News*

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THE VIRTUES OF TURMERIC

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Service dated 1-1-'58, on the virtues of Turmeric, from which I give the following relevant extracts rendered into English:

"Is it right that the bane of modern civilization should have driven away the wonderfully good turmeric and brought instead soaps and other cosmetics into our women's toilet?"

Says Bavannah.

"The infant from its birth and till he is about six months old, seldom gives much trouble to the mother. If he gets sick, it is invariably due to want of care in the mother. If only she takes adequate care to keep clean, in her body, her dress and her general surroundings and behaviour, the infant cannot get ill. For bodily cleanliness in a lactating mother, turmeric is a most essential requisite; with the advent of the so-called modern civilization and the impact with the alien habits blindly copied from the westerners, our women have bade goodbye to our age-old highly salutary habits and traditions. Even in villages the habit of smearing turmeric paste all over the body during bath is slowly disappearing.

What is the benefit to be derived from using turmeric paste? The modern college girl will answer, "Oh! the village girls are mostly given to this practice; it is not for us who have plenty of (high class?) scented soaps and powders.".....It is an age-old custom and a hygienic precept too that all married women and particularly the women just delivered of a baby should use turmeric paste for smearing all over the body, for turmeric paste has antiseptic and bactericidal properties. The lactating mother has to handle her baby frequently and be in close contact with him, in the acts of embracing, breast-feeding, kiss-

ing and caressing; so it is essential that the accumulation of dirt and the products of perspiration forming the nidus for bacterial growth on and around the nipples should be scrupulously prevented; otherwise the baby will get ill through sucking the microbial flora from the surface of the nipples and breasts. These microbes could invade the tissues through any slight bruise on the nipples and cause abscesses etc. in the breast of the mother.

It is wrong for a working mother or any mother for that matter, to breast-feed a baby when she is badly perspiring and it is for this reason mainly that our wise ancestors ruled that lactating mothers should besmear their bodies every day with turmeric paste, while bathing, and it has been found in practice that the effect of this daily morning application lasts for 24 hours. The mother also stands to benefit by this practice, as she will be quite free from skin diseases like itches, scabies, furuncles, rashes etc.

Out of ignorance and sheer aping of western modes, our women have discarded this most important and health-giving prophylactic procedure. It will not be an overstatement if I say that the high incidence of morbidity in children is mainly due to many mothers having failed to make use of this most hygienic practice. The use of turmeric paste is not the sign or emblem of any particular religion or caste. It is essentially a scientifically hygienic procedure calculated to benefit the mother and baby of all castes and creeds. The turmeric tuber should be rubbed on a stone with some water and the paste applied all over the body and face. This is certainly the cheapest, easiest and so the best method of combating all the ills resulting from sweating and accumulation of dirt in the body."

Health Services in USSR

Prevention of disease—a combination of prophylaxis and treatment—is the basis of Soviet medicine, which is reflected in the fact that hospitals, polyclinics, clinics for outpatients—and dispensaries are generally called "*Medical and Prophylactic Institutions*".....Soviet Medicine has evolved a method of prophylactic medical observation ("*dispensarization*") which provides outpatient and hospital treatment and also spots people who do not feel ill, but need careful observation all the same.—(*News and Views from Soviet Union*, 30th Jan. '58).

ANXIETY

Sudhangsu Bhusan Pal Choudhury,
Calcutta

○

CHILDREN's fears may be real or imaginary. It is quite normal for children to be really afraid of hurting themselves by a fall while high up on a tree. But in a child terribly afraid of climbing anything at all and frightened even by a little casual tumble, it is no longer normal fear, but it is anxiety. Such a state is common even in childhood. Infants do not ordinarily understand the short absence of the parents till they are about six or seven months old but very soon thereafter understand the fact and start crying when mothers dress up to go out. He has by then learnt to know and feel the separation from mother, but not the shortness of the duration of mother's absence from him. He however, delights in the assurance that his mother will soon be back, while he soon learns by experience.

As we know from recent investigations that most babies are subject to this state of anxiety mothers should take note of this and adjust their movements so as not to create any sense of fear or anxiety in the child; they should postpone their trips till the child has overcome that state.

Most children appear to go through periods when they are afraid of dangers that do not really exist or threaten them *e.g.*, the doctor, the policeman, wild

or even pet animals. death and loneliness.

In order to understand childhood anxieties, the parents must visualize the menacing fantasies and imaginary threats which haunt the child. As he gradually overcomes these feelings and begin to feel secure, through a greater knowledge of life, anxieties either fade or disappear. How quickly the child sheds his anxieties and grows in strength and security will depend mainly on his relation with his mother and father. He should be assured of the unflagging love of his parents under all circumstances. This is vital for the success of any measures directed towards relieving a child's anxiety state.

There are several practical ways in which parents may help the anxious child. A child who yells in the night because of a bad dream or is afraid of some imaginary things and needs prompt reassurance by the exercise of tact and affectionate patting. A child who asks for it, may be given a small night light to ease his fears. It is certainly wrong and cruel to shame a child about his fears, as such an act will make the child feel that his parents are vexed with him. Reasoning, or arguing it out with him may not help. Imaginary fears are extremely terrifying and so the child must be treated as if he were frightened by something "real." Considerable patience, good humour and tact are required of parents in their treatment of children. They should encourage everything that promotes in the child

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ANXIETY—S. B. P. CHOUDHURY

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a sense of competence and security in day-to-day living. He needs to learn as many skills as he is capable of and should be given a chance to be as independent as he can possibly be, as for example in learning to dress himself, and eat his food without help. These give the pre-school child both new skills and a new independence.

A child's fear of the dark or of going to bed often follows some anxiety state, as for example, his having to go to the doctor for an inoculation or injection. The mother who recognizes this, should encourage the child to "*play inoculation*." He will usually take delight in doing this over and over again, on a toy animal, and feeling that he is the doctor who gives the shot instead of being the recipient. Being actively in control, gives him a sense of mastery in place of anxiety.

But there are occasions when this does not succeed as in later childhood when his personality grows more complex. Anxieties about school-work, for instance, can be so irksome that sometimes a child will refuse to go. It is important to get him back into school as quickly as possible; even if the mother has to stay in school with him until he feels ready to let her leave. Most of the time parents can sense worry in their youngsters, but may not be able to ascertain the reason for it: what events, real or fancied, had caused the anxiety in the first place. The

child's answers alone will not furnish the real reasons. Environmental situations, difficulties and pinpricks, may be at the bottom of the trouble. Sometimes the teacher may be able to help the parents to appraise the situation at school.

On reaching adolescence, new and more generalized things cause him anxious situations resulting from social impacts, with friends, and with members of the other sex? Guided experience and sensible knowledge of the world and its ways—which time alone can bring—eventually help to clear up these worries.

In the meantime, however, a basic sense of security fostered through the years by the parents' love and trust and matured by the guidance they furnished, will form the best bulwark against anxiety states in adult life. Children's anxiety is often increased by questions aimed at finding out the "reason why." The understanding parent will always be able to give effective help. Often children are unable to state clearly what really worries them. But as parents gain more and more experience of the world and of their children's ways and worries, they can always spot some recent happening to account for the outcrop of anxiety. When however, the cause cannot be ascertained by the parents a doctor or other person with special training in the treatment of such neuroses must be consulted.

HOW LIFE BEGINS

What recent research has revealed about one of the greatest wonders of nature

J. D. RATCLIFF

STIRRING drama was under way on the microscope's glass slide. Dr. Landrum Shettles, of Columbia University's College of Physicians and Surgeons, had placed on the slide an egg cell from an ovary of a woman undergoing surgery. To this he had added a drop of male sperm. As he peered through his microscope, a tiny spermatozoon wriggled its way into the relatively enormous egg.

With egg and sperm blended into a completed cell, the globular egg narrowed to an hour-glass shape. At the end of 30 hours it pulled apart to make two cells. At 50 hours, the two cells split to make four; at 60, the four became eight. The process continued until by the end of the third day, there were 32 cells. "Dr. Shettles's achievement represents a major advance in the study of the artificial fertilization of the egg outside the body," says Professor Sir Solly Zuckerman, Director of the Department of Anatomy at Birmingham University.

Dr. George Corner, embryologist at the Rockefeller Institute, says:—"The fertilization of an egg by a sperm cell is one of the greatest wonders of nature. If it were a rare event, or if it occurred only in some distant land, our museums and universities would organize expeditions to witness it, and newspapers would record its outcome with enthusiasm."

Of all the hundreds of billions of cells in the human body, the female egg—though barely visible to the eye—is the largest, the male sperm the smallest. Apparently, a woman is born with a lifetime supply of immature eggs already present in the ovaries. Normally the two ovaries produce one egg per month, with no known pattern as to which ovary is selected each time for the egg-producing job. From puberty until ovulation ends, about the time of menopause, a woman will thus produce between 400 and 500 eggs. Paul Haggstrom, a Swedish research worker, counted 420,000 in the surgically removed ovaries of a 22-year-old woman.

Before the egg is cast free from the ovary, a fluid-filled "follicle," or nest, forms round the immature egg cell. Gradually the follicle enlarges until it makes a bubble-like protuberance, the size of a large marble. Eventually, its membranes stretch and burst, liberating the egg.

The liberated ovum is a tiny glistening sphere about the consistency of hard gelatin; two million would fit in a tablespoon.

Cast free from the ovary, the egg appears to face enormous perils. Unless fertilized, it will expire in about 24 hours. During this critical period "nurse" cells cluster protectively round it. From the ovary it drifts into the

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HOW LIFE BEGINS—J. D. RATCLIFF

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funnel-like mouth of the Fallopian tube. The tube—warm, moist, dark—provides an ideal environment. Gently the egg is moved along the tube, by muscular movements of the tube itself, by fluid currents, and by tiny finger-like cilia. All this activity has but a single purpose: to move the egg into position for its meeting with the sperm. It is in the tube that fertilization takes place. Then, normally, the egg is moved along to the womb.

The egg contains only microscopic amounts of food—a supply of starch, protein and sugar which will last until about the eighth day, when the egg will attach itself to the wall of the womb and draw on the resources of the mother. The egg has only half the number of chromosomes that all other body cells contain. When it mates with a sperm, each will contribute its chromosomes to make the completed cell of original life.

In many respects the spermatozoon is even more remarkable than the egg. It has a minute, oval head and a whip-like tail about nine times as long. It is almost incomprehensibly small—probably about one 500th of an inch in length. Yet tiny as it is, the sperm is able to propel itself with its thrashing tail on a journey of staggering proportions for its size. The sperm's five-inch journey to the egg is the equivalent of a man's five-mile swim upstream.

The best estimates indicate that the sperm contains approximately 30,000 genes—which represent the father's contribution

to inheritance. If a child is to have its father's fair skin, blue eyes and mathematical ability, it is the genes in a single sperm which confer such characteristics. Sperm cells are also determiners of sex. The egg carries only the X chromosome—the girl producer. Sperm carries both X's and Y's, apparently equal number. If the particular spermatozoon which fertilizes the egg contains an X chromosome there will be a girl, if a Y a boy. Thus, the man is the sole determiner of the child's sex.

Sperm cells are deposited by most men in overwhelming numbers—some 500 million at a time. There are clearly apparent reasons for the need of so many. In general, the environment they face is hostile. The vagina where they are deposited is acid—and sperms must have an alkaline environment for survival. When deposited, sperms are almost motionless; within a minute there is an outburst of energy, and the great migration begins.

Of the 500 million sperms deposited, millions perish in the vagina. For those that reach the cervix, the mouth of the womb, great rigours lie ahead. The pear-sized womb must be crossed, where each fold of tissue represents a challenge as great as Mount Everest to a man. Probably not more than a few thousands get as far as the next goal—the upper portion of the womb where the two Fallopian tubes splice in. Only a few thousands start the journey up

the tubes—fighting fluid currents—and half of these survivors will be in the wrong tube, since only one contains the egg.

Although sperms can survive for only a few hours in the hostile environment of the vagina, some manage to live as long as 72 hours in the womb and tubes—swimming strongly to the last. Where do these minute, fragile cells get energy for such a prodigious effort? No one is sure.

The time required for the sperm to reach the egg and bring about fertilization has been determined in various animals. In the humans, it is estimated at some two or three hours. About one time in ten, a woman will deposit two eggs, potential producers of non-identical twins if both are fertilized. There are reports of two extraordinary cases where such twins did not, apparently, have the same father. At other times one fertilized egg, as the result of some unknown conditions within the cell, will develop two embryos instead of one—in which case there will be identical twins.

The events that take place immediately after sperm and egg meet were first witnessed in 1944 when Drs. John Rock and Miriam Menkin of the Harvard Medical School fertilized four eggs artificially. Recently, Dr. Shettles's studies have carried the work much further. For example, earlier studies with animals indicated that the egg had a strong attraction for sperm. When sperm is added to a slide containing a sea

urchin's egg, a pell-mell rush is observed under the microscope. It was guessed that this might also happen in humans. Shettles's findings indicate otherwise. While he watched, sperms swam indifferently past the egg. Fertilization, he concluded, is a chancy affair, depending on a random sperm hitting the egg by accident. But once a strike is made, the sperm holds on tenaciously.

Most research workers had assumed that once the all-important head of the sperm, which contains the nucleus, penetrated the egg, the propelling tail dropped off. Shettles found that the *entire* sperm entered the egg.

Research in recent decades on the egg and sperm has yielded information of immediate usefulness. Greater knowledge of conception is helping childless couples to produce the children they want. It is opening the way for spectacular achievements in animal breeding.

A recent British discovery by Dr. A. S. Parkes and his associates, Dr. Polge and Dr. Audrey Smith, at the National Institute for Medical Research, Mill Hill, showed how the sperm of bulls can be frozen and preserved indefinitely; this deep-frozen sperm is now being widely used for artificial insemination both in Britain and abroad. Today a tenth of the calves born in the United States are produced by this method. Frozen sperm, moreover, has accomplished more than nature could. Scientists in the Marine Laboratory at Aberdeen have fertilized an

autumn-spawning species of herring with a spring-spawning species to produce a new type of herring.

Similar work has been conducted with ova. Fertilized eggs from one rabbit have been placed in another, producing live offspring in no way related to the mother that bore them. Such laboratory ova transplants have practical applications. A prize cow can bear only one calf a year, yet she produces approximately 20 eggs in that time. If such eggs could be

transplanted to "host" mothers, herds could be quickly improved and the production of beef and milk greatly increased. Not long ago research workers produced two calves by means of ova transplants.

Potentially such work offers many possibilities. But these are for the future. For the present, research workers are more interested in gaining fundamental knowledge about the intricate process which occurs at life's critical beginning.—(Reader's Digest June 1957).

FIGHTING MALNUTRITION IN TROPICAL LANDS

MASS starvation and chronic malnutrition present one of our greatest challenges in the tropics and one of the most formidable obstacles to progress; people in this region, out of ignorance and by custom, generally consume starchy diets grossly inadequate in proteins. This is all the more true of people whose staple diet is rice.

According to Dr. Loughlin of New York, a specialist in tropical medicine, taboos in various tropical countries further undermine nutrition. To vegetarians, proteins of animal origin—meat, fish or eggs—is taboo. In many regions of Africa, mothers are banned from eating certain fish, eggs and chickens. These obstacles to human growth and progress have been the subject of constant research. Scientists now believe that supplementing the diets of tropical children with growth-promoting substan-

ces may provide a solution of the problems brought about by the lack of nutritious foods.

A team of medical experts, including Dr. Loughlin and Dr. Wetzel, working in co-operation with the Government of Haiti, claim that the addition of terramycin, an antibiotic, and lysine, an amino-acid essential for human growth to basic foods, meets the challenge.

Antibiotics added to the normal rations of animals have already proved beneficial in promoting growth and increasing yield. They have speeded millions of heads of livestock and chickens to the market on less food. More exhaustive research may offer a solution also to the problem and enable smaller quantities of food to go a longer way in feeding more mouths all over the world.—(T. of I. Bombay).

Nylon is Revolutionizing Industry

NYLON industrial textiles began with parachutes, and from the parachute has grown an extremely wide range of industrial uses in which nylon excels.

Nylon is now one of the keys to improved all-round efficiency. In power transmission on machines, tapes, belts, or ropes of nylon give a better performance out of all proportion to their cost.

Nylon provides an excellent new raw material for the rope and cordage industry. The high tensile strength, lightness, and imperviousness to water, rotting, or mildew, were obvious advantages, in particular, for marine ropes. Frequently nylon ropes are only a third of the weight of the ropes they replace.

Crash barriers, made of nylon ropes, are essential equipment on aircraft carriers. Nylon can withstand the strain of halting the plane quickly before it can overrun the deck, and has proved successful in real emergencies.

Fire services are using nylon hose because of its lightness, combined with strength and reliability.

Filtration, for various purposes, has become more efficient with the introduction of nylon cloths that can be used over and over again.

Nylon's high resistance to abrasion is attracting attention among manufacturers of industrial felts for paper, asbestos, and cement-processing.

The G.P.O. has for some time been carrying out experiments with nylon mail bags. Because of their very long life, their widespread use will soon be a *fait accompli*.

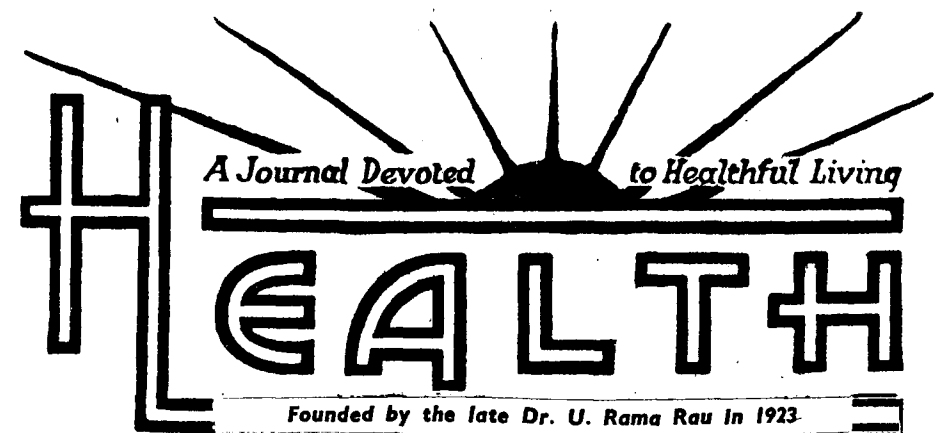
Nylon tarpaulins are comparatively light in weight and afford maximum weather protection. Nylon items of this type with synthetic rubber or plastic coating will prove to be extremely economical because they are long lasting and are readily repaired.

Proofed nylon membranes for preventing evaporation of petroleum and other volatile liquids are already established.

In the tyre cord trade, nylon gives greater strength with lighter material. This is particularly valuable for air-craft tyres.

Already knitted nylon bonded with phenolic resin has proved to be the best material yet tested for crash helmet shells. Helmets of this type have been introduced for general issue to Royal Air Force pilots. The helmet is comfortable to wear, and there is a saving of vital ounces which might be magnified to critical weights by the g-force created during high-speed flying manoeuvres.

Now that warp-knitted nylon has proved itself as an effective agent in plastic laminations, the way is open to incorporate it into car bodies, boat hulls, aircraft components, and impregnated industrial clothing.—(Condensed from *Man-Made Textiles Manchester*, via *World Digest*).



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VEGETARIAN CONGRESS

Advantages of a Lacto-Vegetarian Diet

SHRI SRI PRAKASA, Governor of Bombay, who inaugurated the Fifteenth World Vegetarian Congress at Madras in November last, said:

"Vegetarianism does not mean abstention from flesh: it stands for a definite code of conduct, a way of life and an attitude of mind, the moving spirit of these being compassion for the lowliest of living creatures."

The message of the Vegetarian Congress was in tune with the noblest of our sacred writings and the teachings of our great prophets. It was most welcome in the context of the country's economy and food production. Sri Dr. M. R. GURUSWAMI MUDALIAR one of the most distinguished medical men of Madras who presided over the Congress pointed out that the food needs of vegetarians were composed of rice, pulses, fruits etc.

"All these contain proteins, carbohydrates and fats, to be taken in a certain proportion to maintain good health. Certain minerals are also essential as diet; calcium is most important for the bones; phosphates, are needed for proper growth of strong bones. These are most essential for pregnant women, lactating mothers and children. Vitamin A to E are also necessary for the growth and well-being of infants, children and adolescents. Spices help in inducing appetite and making the food more easily digestible. The average Indian weighs about 130 lbs. and will require about 24,000 calories of food. Pulses and other ingredients of food supply good quantities of calcium. A good combination of different vegetables will help in giving the individual sufficient energy and strength. Vegetable protein gives energy which will be continuous and lasting, while meat protein produces energy which is short and 'explosive.' Meat contains urea, which may lead to blood-pressure, while in vegetables there is no such danger. Meat-eating will also create a

certain amount of excitement and meat diet contains a certain kind of poison which will produce fatigue.'

Mr. W. A. SIBLY, an Educationist of England, stated:

"I have been experimenting during the last 40 years on dietetics and can say that vegetarian diet will be the best to adopt. My experience is that my students who are vegetarians, make a better mark than others. Animals, like cows, bulls and horses, are living on vegetable food and they are strong enough and I see no reason why vegetarian diet should not be generally adopted."

Mrs. Ruby Butts of New York went so far as to say that vegetarianism was the only hope for mankind. Dr. RATNAVELU SUBRAMANIAM of Madras pointed out that vegetarian diet was wholesome and it could also be preserved for some time unlike non-vegetarian food.

Dr. JEAN NUSSBAUM of France referred to his investigations, which gave him certain conclusions regarding the effects of magnesium:

"In places, where there is a predominance of magnesium in the soil, the incidence of cancer is less. Magnesium has the great effect of preventing cancer. My experience is that we should not give animal food to cancer patients."

The vegetarian makes a considerably smaller demand on our wealth-potential. Anything that helps to sustain and foster vegetarianism is bound to benefit the country.

Dr. W. R. AYKROID, one of the world's authorities on nutrition, has said that the daily dietary requirements of an adult man may be met with the diligent use of soya and other beans, dhall, jaggery, greens, cocoanut oil and butter-milk, all costing

not more than six annas at present prices.

"There are still many vegetables in India whose nutritive possibilities have to be explored and exploited in building up a standard all-purpose diet."

Dr. ALEXANDER HAIG, another leading nutrition expert stated:

"It is easily possible to sustain life in good health on the products of the vegetable kingdom.....My researches show not only is it possible, but it is infinitely preferable in every way, as it produces superior powers, both of mind and body. The change in diet causes also a distinct psychological change from nervousness and irritability to a much steadier and calmer disposition."

A physiological comparison of 86 lacto-vegetarians, 25 vegans (who take no animal products), and 88 normal meat-eaters, was conducted by Dr. MERVYN G. HARDINGE, a meat-eater, who concluded, among other things:-

"Lacto-vegetarian diet is fine for growing youths and expectant mothers. Raised as such from the cradle, vegetarians grow as tall as anybody else."

Cholesterol in the blood is now known to be one of the chief causes of heart and artery diseases and is perhaps also related to cancer. Recent researches have shown that moderate vegetarians have a little less cholesterol in their blood than meat-eaters and strict vegetarians have strikingly less. A study of pregnant mothers by Dr. STARE of the Harvard University revealed that non-vegetarian pregnant mothers suffered more from constipation, swelling of the ankles and pimples on the face than vegetarians.

We, therefore, stress the fact that a lacto-vegetarian diet is ideally the best, particularly for people living in the tropics.

The Problem

PILES

RICHARD M. GODFREY, M.B., B.S.

PILES, or hæmorrhoids, to give them their proper name, are swellings due to varicose veins in the back passage (rectum). A person with an attack of piles feels discomfort and irritation here. Bleeding sometimes occurs and sometimes the piles come down.

Anything raising the pressure in these swollen veins, or irritating the delicate lining of the lower bowel, may bring on an attack of piles. Pregnancy and constipation are two important causes. Overdoing the food and drink are also bad for piles. General tiredness can make you more liable to piles because of slackened muscles.

Many doctors believe that just as some people are born with a tendency to develop varicose veins of the legs, others inherit a tendency to piles. Indeed it is probably the habit of walking upright that makes the complaint so common in man and not in other animals.

The veins in the back passage have to carry a column of blood about eighteen inches tall—that is the distance back up to the heart—without much support from surrounding muscles. It is not surprising then that they tend to swell and cause piles.

Many patients are, not unnaturally, vague about piles and

they are apt to describe any condition in or near the back passage which causes discomfort, irritation, pain, bleeding, something coming down, or a feeling of fullness after evacuation, as piles.

The doctor investigating such a patient for the first time will often do three things:—(i) He will inspect the area under a good light. (ii) He will examine the inside of the back passage with a gloved finger. (iii) And he will insert an instrument called a *proctoscope* which gives a good view of the inside of the lower bowel.

Only when the doctor is satisfied that your symptoms are due to piles will he start talking about treatment. (1) This treatment is in two parts. The first part is aimed at re-educating faulty bowel habits which are aggravating the piles and bringing on the attacks. (2) The second part of the treatment will be to relieve the pain, bleeding and so on.

(1) Now for the first part, that is the re-educative treatment: It is most important to realize that constipation must be corrected before any improvement in the piles can occur. People become constipated for many reasons. Sometimes they have not been adequately trained in childhood and develop a habit of holding on to their motions. They may sit about too much. Many of them have sedentary jobs. Lack of time may tempt some people to disregard the call to stool. Stress and anxiety are often to blame for constipation.

General flabbiness and poor muscle tone, often associated with obesity, may be the trouble. Or quite possibly, the abuse of purgatives, by getting the bowel used to regular stimulation by drugs, weakens its normal response to food and slows its passage along the gut. In this way more water is extracted and the waste matter that arrives at the back passage is too dry and hard. Water is a very important factor in constipation. The lower bowel is the body's reservoir of fluid. It is the first to be depleted when water is needed elsewhere and it is the last to be restored. So drinking an extra pint of water a day does sometimes help.

In some people, lavatory habits may need correction. Often when the piles come down they give a feeling of incomplete evacuation. Because of this feeling, there is a tendency to keep on straining for some time and to no good purpose.

This is because the piles have become nipped by the ring of muscles called the *sphincter* at the back passage. Now they go on increasing in size with the prolonged straining. The right thing to do is to wait for the call, pass one stool and leave it at that. If the piles are protruding, they should be gently pushed back with the 4 fingers of the left hand.

It is important to give the bowels something to work on. An increase in fruit, vegetables, salads, breakfast cereals, and the like, usually helps. There's a lot to be said for the prune.

Laxatives are sometimes used to treat constipation while faulty bowel habits are being corrected and a wiser diet established. By far the safest short-term laxative is senna, which is now available as granules and tablets as well as the familiar pods. Mineral oil preparations, such as *liquid paraffin* and paraffin emulsion, as a rule are *not good* for patients with piles. Leakage is a nuisance and these preparations may be otherwise *also harmful if long continued*.

The bulk-type laxatives which act by swelling up among the food are helpful. By doing this they give the bowel muscles something to grip and to pass along.

(2) Measures to relieve pain and other symptoms include the use of plain glycerine suppositories to ease the passage of a hard stool. No harm will come from using them occasionally but *don't make a habit of them*. The only objections to a suppository are the messy business of inserting it and the pain of pushing it in against an inflamed pile.

The new pile tablets avoid both these difficulties. These tablets contain Cetyl palmitate, or cetaceum (a special wax obtained from the head of the sperm whale), and are called "Pharmacetyl." They are taken by mouth. Cetaceum is not absorbed on its way down the gut. When it reaches the lower bowel it is in a "tacky" state and it sticks to the lining of the bowel. Inflammation is reduced and bleeding stopped. Cetaceum seems to work best in an

acute attack of piles but some longstanding cases can also be helped.

[These tablets are now available under the National Health Service in Great Britain].

The injection treatment is designed to stiffen up the tissues surrounding the piles. In this way the piles are prevented from coming down and bleeding when the bowels act. In most cases the piles only come down during evacuation and they return by themselves, or with a little help, as soon as the bowel is emptied. These cases do well with injections. In long-standing cases however the piles descend by themselves during the course of the day. They are very uncomfortable and cause a moist discharge. And they soil the clothes until the

victim can find an opportunity to lie down and push them in. In still more advanced cases nothing will succeed in getting them back.

In these last two types of case an operation is preferred. This operation involves seven to ten days in hospital and then a further three weeks convalescing. Then the patient can settle down to a life free from discomfort. In the whole realm of surgery there is no operation to equal this one for its uniformly excellent results.

Finally, do remember that piles and cancer frequently have similar symptoms and you should consult your doctor—and consult him early—rather than indulge in self-diagnosis and self-treatment.—(*Family Doctor*, August 1957).

After Your Tooth is Out

The removal of a tooth leaves an empty socket in the jaw, which immediately fills with blood which clots a few minutes later. This blood clot is an essential factor in uneventful healing. Forming a natural protection for the socket, it prevents the entrance of bacteria and acts as a scaffolding for the rebuilding of the breach in the bone with repair tissue. The prevention of complications depends on the undisturbed formation of a healthy blood clot.

Continual mouth-washing interferes with this, and is a common cause of bleeding. Increasing the blood flow to the part, by taking hot fluids or strenuous exercise soon after extraction is another causative factor.

First-aid treatment is basically the same as that for hæmorrhage anywhere else in the body—the application of pressure. In the mouth it is achieved by placing a pad of bandage over the socket and biting hard for ten minutes. If this fails, it must be repeated for a longer period, but should it continue afterwards then a dental surgeon's advice must be sought. Apart from the very rare cases of blood disease, it is a trivial condition and need not give cause for alarm, once the simple home treatment is known.

Just as a wound inflicted anywhere causes some pain, so will there be some discomfort after an extraction, but it is normally slight and can be overcome, if necessary, by taking an aspirin preparation such as one uses for headache. However, a patient can do much to aid healing of a painful socket by taking hot salt water mouth-washes after meals, and whenever soreness is felt.—(H. Levison, F.D.S.B.C.S. in *Better Health*, London).

The Sea's Radio Doctor and His Labour of Love

A LITTLE Italian doctor with a bald head and a big heart is proving one of the best friends that sailors of all nationalities ever had. There are many active and healthy seamen on the oceans this very minute who owe their lives to this quiet, unassuming man, Doctor Guido Guida.

He lives and works in Rome, and housed in the corner of his office is a high powered radio. At all hours of the day, and often during the night, the set crackles, and Doctor Guida runs over to it and puts on the ear-phones. Soon he is in direct contact with a ship at sea, a ship that requires urgent medical aid, but has no doctor aboard.

The captain tells Doctor Guida the symptoms of the suffering man. The trouble may be anything from blood-poisoning to appendicitis. The little doctor makes his decision from the symptoms, and gives instructions to the captain as to the treatment to be taken.

Sometimes an immediate operation is necessary, and then Guida brings a specialist surgeon to the radio to instruct the captain in the use of his surgical instruments. Hundreds of lives and many hours of pain have been saved by the quiet voice travelling out from Rome to a ship at sea.

Most years Dr. Guida receives on average about fifteen hundred calls for medical advice. He is aided by an unpaid staff of clerks, physicians and surgeons, all of whom

believe they have found a way of helping suffering humanity.

Sometimes there are language difficulties. On one boat a man was suffering from severe internal pains, and he could speak only Polish. A fellow seaman translated his words into English. This was translated into French for the skipper, and luckily the radio operator spoke enough Italian to be able to pass on the symptoms to Doctor Guida's specialist. By the same channels Doctor Guida prescribed the treatment, and the man was made comfortable until he was passed over to a shore-hospital when the ship docked.

Some cases are so urgent that a few minutes lost will mean death to the sufferer. On one occasion a boiler exploded on board an Italian ship, and an engineer received a shaft of iron right through the neck. He was fast bleeding to death when the captain radioed MEDRAD-CIRM and contacted Doctor Guida.

The little doctor brought a specialist surgeon to the radio. He gave instructions upon how to prevent further bleeding, how to apply special bandages, and how to inject penicillin and anti-tetanus serum. The bleeding was stopped, and the man reached port in time for an operation which saved his life.

Doctor Guida does not like to receive calls dealing with minor complaints such as sprains, stomach-aches, hangovers, and so on. He likes to keep his wires free for more urgent matters—a

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THE SEA'S RADIO DOCTOR

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few minutes might mean life or death to a sailor hundreds of miles away.

To prevent these calls for minor ailments he has issued a medical manual to ships. This enables the captains to give relief to sufferers without bothering Doctor Guida.

This manual also contains charts of human anatomy, and these the doctor refers to, when he broadcasts instructions for an operation at sea. They are invaluable to the unskilled and extremely nervous amateur surgeon.

What caused Doctor Guida to start this invaluable voluntary service to sailors? Guida was brought up in Trapini, Sicily, and his family were seafaring folk. Often his father and older brother would tell him of occasions upon which a sick man had lain suffering with nobody able to help him because there was no doctor on board.

Guida's vocation became medicine and not the sea, but he always remembered the tales of suffering which his father and brother told. After a long financial struggle Guida became a

doctor, and was a professor in a medical school by 1935.

Soon after the last War, he had this bright idea. He proposed to his medical colleagues that they should set up a voluntary network of doctors and surgeons to broadcast free aid to ships who needed medical service.

The idea caught the imagination of everybody. His fellow doctors agreed to be always on call, the Italian Navy gave valuable radio equipment and an expert radio operator. And *Radio Rome* agreed to relay messages for the doctors.

Then Guida sent letters to various shipping lines telling them that the service was in operation. Since that moment the calls have not stopped coming in, and the little Doctor Guida has not stopped giving advice that has saved hundreds of lives.

The sea could do with more men with the unselfish principles and boundless imagination such as Doctor Guido Guida has shown.—*Nautical Magazine*, Glasgow, Jan. 1958 via *Meet interesting people*.

George Bernard Shaw once got a letter addressed to George Bernard Shawm. In a beard-tossing fury, Shaw roared to his wife that his correspondent could not even spell the name of the world's greatest man! Moreover, fumed G.B.S., there was no such word as "shawm." Shaw's wife, one of the world's most martyred women, quietly disagreed, led Shaw to a dictionary and pointed to "shawm.....an old-fashioned wind instrument."—(*Archibald Henderson*).

It is not what we eat but what we digest that makes us strong; not what we gain but what we save that makes us rich; not what we read but what we remember that makes us learned; and not what we profess but that we practise that makes us Christian.—(*Bacon, Bull. of The Alabama Dental Assoc.*).

VALUE OF PRAYER

In the Treatment of Diseases

Lourdes after a Hundred Years

ORGANIZERS at the French pilgrimage town of Lourdes are gearing themselves for a busy season. They are preparing for a mass invasion this year. Eight million pilgrims from every corner of the earth are expected to take part in the centenary festivities, for it was on February 11, 1858, that Bernadette Soubirous, a 14-year-old peasant girl, had a vision of a Beautiful Lady in a niche above a cave to the west of the town.

Since then, millions of the world's sick and lame have flocked to the town to seek and pray for relief from their affliction. On an average a million pilgrims arrive at Lourdes each year. To cater for them, there are two hospitals and many fine hotels. But this year the crowds at Lourdes will break all records.

Lourdes has witnessed many strange things in the last century. Only 50 miraculous cures have been authenticated by doctors, neutral commissioners, and Church authorities. But thousands of other pilgrims have been able to discard their crutches and rejoice in their delivery from assorted afflictions.

Commissions of inquiry into so-called miracle-cures must, by the very nature of their terms of reference, act with extreme caution. Cures are never certified on the spot. Two to three years, sometimes even more, are

allowed to pass before a final judgement is made. The latest survey indicates that last year's healings have exceeded anything so far. However, there is an understandable reluctance to comment on this phenomenon. The attitude taken up by impartial commissioners is "Let's wait and see."

Bernadette Soubirous was one of seven half-starved children. They lived in a dark and squalid hovel of a place in the Rue des Petits-Fosses. It had been a poor harvest, and the 51-year-old Francois Soubirous was at his wit's end. He tried desperately to find work, but met only with refusals. It was bitterly cold. The family had no more wood. There were no windows, and the whimpering children crowded round their weeping mother.

The eldest and tallest of the girls got up with a sudden show of resolution. Wrapping a tatty kerchief around her head, she ran out to look for wood. She limped a little because the swelling on the right knee was painful. A doctor had told her that he could do nothing. She was a frail girl, and asthma kept her breath short. The cold wind sweeping across the Pyrenees bit into her. But she knew that there was wood near the grotto of Massabielle.

It was almost noon when she reached the grotto. She had

always been a little afraid to venture inside, but something drew her inside now. Suddenly she saw a vision of a Beautiful Lady.

They spoke for several minutes. Bernadette listened in rapt attention as the Beautiful Lady said that her leg would heal as soon as she bathed it in a spring which she was going to reveal to her. With that the apparition was gone.

Bernadette did as she was bid and ran home as fast as her thin legs would carry her. Breathlessly she told her parents of the encounter. "She was a beautiful lady and she said that she would be back." The people of Lourdes were sure that the girl was speaking the truth. They had seen her limp and now her leg was as well as it had been years ago.

Word of the miracle reached Commissar Jules Jacomet. "Nonsense," he snorted. "I'll soon put a stop to this swindle." He summoned Bernadette for an

interrogation. The girl repeated what she had seen, but still the Commissar would not believe. "I shall have that grotto nailed up, you lying wretch!"

He ordered the gamekeeper Pierre Callet to stand guard over the grotto. A weeping Bernadette, forbidden to see the vision, was sent home. But news of the fountain and its healing powers found its way to Paris. The Empress Eugenie prevailed upon her husband, Napoleon III, to order the grotto to be re-opened. A letter was despatched to Jacomet.

Little was heard of Bernadette after that. In 1866 she joined a religious order at Nevers and took the name of Sister Mary Bernard. There she died in April, 1879.

This year eight million people will come to Lourdes to pay homage to a girl whose unshakable belief gave the world a sign of hope.—(Michael Gray, in *Bristol Evening Post*, via *World Digest*, February 1958).

Family Planning

'Safety period' Strings supplied to Mothers

A thousand "poor illiterate deserving mothers" who have learnt the 'safe period' family planning method and who are visiting family planning clinics in the Madras City, will each be supplied free of cost a string of safety wooden beads.

One of the methods of family planning advocated in the Manual is the 'safe period'. While literate persons can have assistance and distinguish the safe period and the fertile period from the Manual or the family planning calendar, there is no aid available to illiterate persons to determine the 'safe period'. The Government has, therefore, approved the proposal of the Director of Medical Services to purchase 5,000 strings of beads and distribute them to deserving mothers.

The staff of the Family Planning Instruction Centres of the Corporation of Madras will watch the effect of the first batch of supplies, and the Corporation will submit a report to the Government.

IN England and Wales in 1954 there were no less than 6,016 reported incidents of food poisoning. Thirty-four of the victims died.

Food poisoning can be prevented. The greatly increased incidence in England and Wales since 1939 is due mainly to altered social habits. Since the 1939-45 war, there has been a vast increase in the number of people who have at least one meal a day outside the home; to meet this demand there has been a related increase in the number of factory canteens, school meals service, *cafeterias*, quick-service lunches and snack bars. There has also been a revolution in the catering industry—meat and meat products are prepared in factories, some with a weekly output of hundreds of tons; processed food is bought in shops on a much larger scale than pre-war. Now, there is no harm in all this provided reasonable care has been taken in the preparing, cooking and packaging of the food so that bacterial infection or contamination has been avoided—unfortunately reasonable care is not always taken.

[In the larger cities and towns of India too, many people now freely resort to hotels and canteens for breakfast, lunch and tiffin.—Ed. HEALTH].

Three causes of food poisoning.—Food can be poisonous to man in *three* ways:—it can be poisonous by its nature, like the gourds in the Bible story; it may be made poisonous by contamination with chemicals, usually dissolved metals from unsuitable containers, or it can

DEATH IN THE POT

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become poisonous by contact or contamination with germs (that cause food poisoning).

Now let us examine some of the chemical causes:—acid food stored or cooked in zinc-lined containers dissolves the zinc, and poisons those who consume the food. Copper can be similarly dissolved from unclean copper cooking utensils. Last year, however, two such outbreaks were reported in the school meals' service, one due to mashed potatoes stored, whilst awaiting serving, in zinc galvanized containers; and the second due to apples cooked in unclean copper containers. Similarly, acid food stored in cheap grey enamel containers may become contaminated with antimony from the poor quality enamel.

An obscure outbreak of nerve inflammation and paralysis in North Wales in 1948 was found to be due to lead from black-market food stored in drums that had contained lead compounds. With the more general use of stainless steel and plastic equipment for preparing food, chemical poisoning should become a thing of the past. Regarding safety of aluminium vessels for cooking there is considerable difference of opinion,

but there is no need to fear serious harm.

This brings us to the most common cause of food poisoning—*bacterial infection*.

Three main kinds of germs commonly implicated in outbreaks have common characteristics:—they are all microscopic in size, and as they all are found naturally on the skin of man, or in the large bowel of man or animals, they grow best at blood-heat, *i.e.*, 98.4°F. Cool conditions limit their growth; and at, or near, freezing point, growth is suspended, but freezing does not kill them. They will also grow readily in moist warm food if they gain access to it, also on sweetmeats, particularly those containing artificial cream or prepared from dried or frozen egg. Very very rarely are vegetables or fruit contaminated.

In bulk cooking, large numbers of people may be affected if the food is contaminated; secondly, large quantities of food take longer to cool and give germs a longer time to grow at a suitable temperature. Food poisoning germs like warmth, that is why outbreaks are most common in cold countries during the summer and autumn. Food dangerously poisoned by germs usually has a normal appearance and taste, but such tainted food should not be eaten.

Food poisoning due to the staphylococcus germ is explosive and dramatic in occurrence. Severe physical collapse appears in 2 to 6 hours after the infected food is eaten. This is the type of illness that may ruin wedding festivities, picnic trips to the

seaside, etc. The germ is transferred to clean food from septic cuts, or boils or pimples on the hands of food handlers. The germ is also found in the nasal cavity of 20 per cent of normal healthy people, and may be transferred to food by sneezing or from the nose to the hands, and then to food. If conditions are suitable, rapid growth follows, forming a powerful poison which pole-axes its victims.

Susceptible foods should be handled as little as possible, and preferably by mechanical means—nasal contamination must be avoided.

The commonest group of germs are called *Salmonella*. They are an intestinal group found in the guts of cattle, pigs, ducks, and hens, rats and mice, and domestic pets, and in frozen or dried eggs and in fresh duck-eggs. A wide variety of foods may be attacked. The germ causes illness by invading the tissues of man and multiplying there. Once a person is infected the germ tends to linger in the intestine, and if the victim is a food-handler much food may be contaminated by faulty toilet habits before he is detected. Human carriers are common. Control is difficult but includes the exclusion of rats, mice and cats from food premises; and elimination of human carriers by medical treatment. All susceptible foods should be kept cool, clean and covered. Nevertheless control is a difficult problem and infection from case to case is common.

Thus most cases of infection of food arise from accidental contamination with germs from

animal or human sources; this can be prevented by scrupulous cleanliness at all stages in food preparation. The remedies are simple but the increasing incidence of food-poisoning would seem to indicate that they are not being universally applied.

One ignorant food handler can poison hundreds; may even close down a factory or a school. Food handlers should therefore, be offered simple instructions on the above facts, and trained in the use of a proper technique.—(*Health Horizon*, 1957).

ETHICS FOR PATIENTS

THE original Code of Ethics of the American Medical Association, adopted in 1847, listed 10 obligations of patients to their physicians. They have long since been dropped, but perhaps unwarrantedly. Here are some samples from them:—

“The members of the medical profession.....who are required to make so many sacrifices of comfort, ease and health..... have a right to expect and require that their patients should entertain a just sense of the duties which *they* owe to their medical attendants.

“A patient should.....confine the care of himself and family, as much as possible, to one physician, for a medical man who has become acquainted with the peculiarities.....of those he attends is more likely to be

successful in his treatment...

“A patient should never weary his physician with a tedious detail of events or matters not pertaining to his disease.....

“The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinions..... to influence his attention to them.....

“A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered by his physician, for these are of such a character that no mere pecuniary acknowledgement can repay or cancel them.”—(Quoted in the *Jour. of Iowa State Med. Soc.*, December 1957).

Apparatus for Defibrillation of the Heart

Electric shock and certain heart diseases, such as spasm of the coronary arteries, may lead to a fatally dangerous disturbance of the heart. This condition (called fibrillation of the heart) is characterized by the onset of in coordinate irregular small quiverings of the separate fibres of the heart muscle. The fibrillation may also start at the time of surgical operations on the heart, which have now come to be widely practised in modern medicine.

A special apparatus for elimination of cardiac fibrillation was designed and produced at the laboratory of experimental physiology for resuscitation of the human organism at the U.S.S.R. Academy of Medical Sciences. This apparatus generates short electric impulses 0.01 seconds in duration; the above-mentioned electric effect provokes simultaneous excitement of all the fibres of the heart muscle and helps to restore their normal rhythmical contractions.—(*Soviet News*).

The Health Aspects of Games and Sports

R. E. SMITH, M.A., F.R.C.P., London

AT all ages, most children like games and sports. I include in games and sports such activities as athletics, football, cricket, tennis, hockey, lacrosse, fives, squash rackets, swimming etc.

All forms of physical exercise are beneficial. Some have advantages over others and it is essential to have variety. Staleness is one of the worst features of over-training. If games are really meant to be recreation, they should, of course, be enjoyable and a visitor to a school who had not seen one for the past thirty years would be struck by the fact that things like cricket were no longer *le rigueur*. There are many more tennis courts as well as fives and squash courts in our public schools than formerly and certainly many more tennis courts in secondary schools etc. These are, of course, expensive items and often stand idle, school authorities should make better use of them by altering their time-tables a little.

Games are educational and certainly if one is to get enjoyment out of games, one must put almost as much into them as one gets out of them. This naturally means having lessons. Everybody has to learn the rules, everybody has to obey the referee and everybody has to “play cricket.” Perhaps after making these generalizations, one can now deal with a few of the common sports.

Running :—The simplest form

of exercise is running or walking. To go for a run just for the sake of taking exercise is not exciting although many boys get satisfaction from improving their speed and durability. Whether the distance is a sprint or a long run, training is essential. Most schools do not have cross-country runs for boys under 13 years of age but they do have athletic contests and on the whole, the distances are not so long. Children of 11, 12 or 13 would not be expected to run the same distances as adults. Even the most highly trained and efficient sprinter begins to slow up after 80 yards and cannot maintain his speed for the last 20 yards or metres; certainly young children should not be encouraged to attain anything which might be called a “juvenile Olympic standard.”

The child who is a very good athlete at school very rarely becomes the true athlete later. Alterations to suit juveniles are fairly easy with regard to athletics but difficulties arise with games such as tennis or cricket. Too much organization is bad and indeed is often impossible and anybody who watches an infant school at play will realize that the children are enjoying themselves and getting physical exercise and any advances might be in the wrong direction. Athletics are therefore, probably more suited for the over-elevens and competition is probably best for those between the ages of 14 and 18. This can take various forms.

either against the outsider or against one another.

Swimming:—Every child should learn to swim. It is very rare indeed for children to be able to swim before the age of 5 but every year after that it becomes easier. Swimming certainly exercises every muscle, including, of course, the cardiac and respiratory group. If it can be done in the open air, so much the better. The effect upon the skin comes first. Those with good skins make their skins better, well bronzed and able to resist infection and much more able to deal with the heat and the cold. Swimming is strenuous exercise and should not be carried to excess and this especially applies if one has been playing some other game such as tennis. Furthermore, one should not continue to swim after one feels cold. One can swim as many times a day as one likes. The young need far less time between a meal and a swim than the gourmand does.

Football:—Football makes a tremendous appeal to youth. I went to a Soccer school and spent most of the rest of my life at a Rugby school and I think it can be summed up quite fairly by saying that any school, which has gone from soccer to rugger, has never gone back. Once again, training is necessary. Certainly at the beginning of the season, shorter games should be played than at the end. One can assume that most children are more or less continually fit and that their muscles and tendons do not have to be brought up from absolute

slack but on the other hand, there is no doubt that many more minor strains of muscles and tendons occur in the first month of term than in the last. These games are, of course, quite unsuitable for girls.

Lacrosse and Hockey:—Lacrosse is said to be a better game for girls as the constant stooping in hockey does not occur in lacrosse but I think it would be very difficult to pick out a girl who had been playing hockey by the fact that she stooped. Certainly hockey is a rougher game as I can testify after playing mixed hockey! Hockey or lacrosse are excellent, provided one plays the rules, plays as a member of a team and enjoys the game.

Cricket:—A leading authority said some 20 years ago "Little boys should be taught cricket by means of 'Tip and Run'. They want fun at 'Tip and Run', they get it. They want to be all out, all out, all the time. Eight a side they should play, with a pitch of twelve to fifteen yards. Everyone should bowl in rotation, unless anyone prefers not to. The most workable rules would soon be evolved after a very few games. Sneaks should be rigorously barred by making any ball bowled that bounces more than once a 'no-ball'.

"The point is that out of the jolly breathless scramble would emerge small people keen and able to appreciate the finer points of the better game, having been properly inoculated with the incomparable fun to be had from playing with a moving ball."

Lawn tennis, fives and squash rackets:—I have not talked about these very much although I believe that they have a real place among games for the young—certainly they are the sort of games that one can continue in adult life and if one has been properly trained in them and developed a real liking for them, one can say that they have been satisfactory educational features.

Certainly, all these should be correlated with physical training. Once again, if a visitor, who had not seen a school for 50 years, came back, he would be surprised how a lot the gymnastics had gone. The Physical Training instructor now aims at training muscles, heart and respiratory organs with the minimum wastage of energy.

Other organs such as the glands, the digestive tract and the kidneys have parts to play in perfect physical fitness, which includes good posture and suppleness. The games aspect and the P.T. aspect should go hand in hand.

General considerations:—I would again like to emphasize the need for variety and also

for getting pleasure out of exercises. This cannot be done without an effort and certainly some instruction. What are the benefits?

I think one can say that the healthier the organs, the less liable they are to be attacked by disease. I have always been impressed by the fact that a healthy skin is much less prone to infection than the unhealthy one. I have been equally impressed by the way the healthy gut recovers from an operation. There is no doubt at all that nowadays when everybody is so much more healthy that there is far less rheumatic heart disease etc., and I should encourage all children to take a healthy amount of exercise.

There are, however, a few who strongly dislike any form of exercise but every school can produce names of great men who were most unhappy at school but who made names for themselves in the world afterwards. These are the exceptions for whom perhaps special provision should be made.

By and large, all work and no play makes Jack a dull boy.—(*Mother and Child*, July 1951).

Mother is Appreciated

My father was such an undemonstrative man that we children used to worry because he never seemed to show my mother proper appreciation for her gaiety and the many ways by which she made our shabby old house a real home.

But one after-noon Mother stopped at a neighbour's house to help with a sick child and was delayed getting back. Father arrived home from work at his usual time and walked into the living-room, which we eight children were completely filling with lively commotion.

Father stood in the doorway, frowning and surveying the scene. Then he said, "Where is everybody?"

We never again worried that *Mother* was not appreciated.—(Lois Duncan in *Life's like that*, R.D.).

TOBACCO WITHOUT NICOTINE

N. GLUBOKOVSKY, U.S.S.R.

WE often say and hear it said that smoking is bad for the health. Yet millions of people go on smoking and will not listen to good advice.

All smokers are aware of the danger of tobacco, but far from all are able to conquer this habit. Nicotine is one of the most poisonous alkaloids (vegetable alkali) contained in tobacco.

Where is this alkaloid, so dangerous to smokers formed? It took years to find the right answer to that question.

Every plant has a root, that much every one knows. Until recently the general opinion prevailing among scientists as regards its role in the life and development of the plant was that the root is an organ which feeds the plant, supplying it with water and mineral substances from the soil.

But, according to the experiments conducted for a number of years by Academician A. Shmuk and scientists A. Smirnov and G. Ilyin, the plant's root is a kind of laboratory for the synthesis of most important organic compositions. These compositions are delivered from here to the part of the plant that is above ground.

These scientists started with the study of the chemical composition of tobacco, undertaken in order to determine the substances having a good or bad effect on the quality of tobacco and establishing the reasons for its various properties (aroma, taste,

strength, etc.). The experimenters also sought to determine the composition of organic acids contained in the tobacco plant; they soon arrived at some interesting and important conclusions, on the strength of which a method of producing citric acid from tobacco was worked out for the first time, by treating it chemically so as to eliminate all its harmful properties.

In consequence of these experiments a brand of tobacco without nicotine was grown for the first time in the world in the Soviet Union.

Tobacco and tomatoes are very closely related, although tomatoes do not contain nicotine.

Many grafts of the tomato plant were made. Grafted on tobacco the tomato grew well, yielding excellent red tomatoes in which there was nicotine, as also in the whole plant.

The results of grafting tobacco on a tomato root were entirely different. The tobacco developed well and there was no nicotine in the tobacco leaves! Thus, alkaloid plants where the first to be used in experiments showing the particular importance of the root in the plant's vital activity. It became clear, after these experiments, that the synthesis of nicotine occurs in the roots of tobacco plants. So the original location where nicotine is formed was at last discovered.

MAR. '58]

HEALTH TIPS FOR TEEN-AGERS

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G. Ilyin, is now continuing the work on the origin of the alkaloids, the ways of their formation and their role in plant metabolism.

Experiments with the use of radioactive isotopes recently conducted in the Bach Institute of Biochemistry of the USSR Academy of Sciences, have shown that radioactive nicotine is formed only in case the tobacco plant has a vital root habit.

Unfortunately the properties of tobacco containing no nicotine are not inherited. This tobacco

can be obtained by grafts only.

The future will show if experts in genetics can make tobacco transmit this new property hereditarily. At present selection is the method widely used in research work conducted in order to obtain tobacco with the least possible quantity of nicotine.

Some tobacco plant experts think that the absence of the alkaloid will not affect the taste of tobacco.—(*News and Views from USSR*, 28th Feb., 1958).

[Note:—But where, we ask, is the need to use it at all?—Ed. HEALTH].

HEALTH TIPS FOR TEEN-AGERS

YOU are young and healthy, but habits which you form now will affect your health and produce their results in later life. Form regular and healthy habits while you are still young.

1. Spend some part of the day in exercise in the open air. If your work keeps you indoors, take up some game or sport that will take you out of doors.

2. Eat meals at regular hours. Three good meals a day is all you require. Do not eat between meals and spoil your digestion.

3. Cleanliness and health go together. Wash thoroughly morning and night. Take a pride in your appearance; keep smart, clean, and tidy.

4. Remember the danger in cigarette-smoking. Cancer of the lung is twenty times more common in heavy smokers than among those who do not smoke. Once the habit is formed it is difficult to break.

5. Get sufficient sleep at regular hours. Late nights sap

your vitality and your ability to work or play the next day.

6. Take care of your teeth. Sweets and sugary foods between meals, and especially last thing at night, destroy the teeth. Brush your teeth night and morning. Visit your dentist at regular intervals.

7. Have your chest X-rayed regularly. Visit the Mass X-ray Unit when it comes to your area. This valuable check-up is free of charge. Chest disease may be a danger to others.

8. Accidents are causing more loss of working hours and even of life than any single illness.—Take care.

9. Do not worry about your health, but do not neglect it. If you are ill go to your doctor at once and take his advice.

10. Work well and play well, and remember the maxim:—"A Healthy Mind in a Healthy Body"—(*World Digest*, December '57).

MERCURY UNDER YOUR TONGUE

And What to Do When it Rises

No one using an ordinary clinical thermometer can get more than a rough idea of their real temperature. All they can be sure of is that it is around normal (97 degrees F. to 99 degrees F.); "up" (about 100 degrees F.); or "high" (over 103 degrees). There are too many variables. The thermometer may not be accurate. It may not be left long enough in position—even so-called half-minute thermometers can take as long as three minutes to give a truthful reading. And it depends where you put the thermometer.

A doctor who did some careful research with a stop-watch and accurately standardized thermometers, came up with some surprising conclusions. He found that the temperature taken in the armpit was sometimes *higher* than the temperature in the mouth!

He also found that in the same patient the difference between the mouth and armpit temperatures varied by as much as three and a half degrees, and that it could take over four minutes in the armpit for a thermometer to reach an accurate reading. So much for the popular belief that the mouth temperature equals the armpit temperature *plus* one degree.

Once you know you have a raised temperature, should you do anything about it apart from going to bed? The popular idea is that a temperature is something to be got down as soon as possible, and a whole battery of

easily-obtained drugs are available for this purpose.

This is thoroughly bad medicine. The only valid reason for hurrying to get a temperature down is, if it is going up too high—above 104 degrees F.—and then tepid sponging is much better and safer than drugs. No fever below 102°F needs to be got down unless it has been going on for a long time and wearing the patient out, for in many illnesses the *fever* is beneficial. It is usually the response of the body to infection, and it helps mobilize your defences and "burn" out the invading bugs. The fever that accompanies the so-called Asian 'flu is probably more use in getting you over an attack than any pills you can swallow.

When buying a thermometer, choose one with a stubby bulb and legible figures. There is a kink above the bulb which prevents the mercury running back once it has gone up the tube, so there is no hurry to read it. Remember this when taking a baby's temperature (the fold of the groin or the armpit are the best places). Put the thermometer in a safe place, and read it after you have put the baby down.

When you are sure of the reading, shake the mercury down past the kink towards the bulb, wash the thermometer in antiseptic, rinse in cold water, and put it carefully away.—*Medical Correspondent*, in *News Chronicle*, (London).

BLOOD CLOTS

JOHN E. EICHENLAUB, M.D.

Here's what your doctor can do when the body's mechanism for control of bleeding begins to work overtime

Condensed by T. N. S. R. Chari

A CORONARY heart attack is caused by a blood clot. This clot stops up one of the arteries to the heart muscle. It's a serious situation already when this happens. But the clot is likely to spread, making it even more serious. The crucial coronary blood vessels are probably roughened and narrowed or the first attack wouldn't have happened. The blood flow through larger nearby vessels is slowed by the stoppage in the passage ahead of them, by nerve reflexes which clamp them down, and by the drop in blood-pressure and pumping action which go with damage to the heart itself.

Clot-stopping medicines keep the clot from spreading in spite of all these factors. Heparin, which must be given by injection, takes hold immediately. It is hard to keep at a workable level for very long without danger, so is usually used as a stop-gap only. Tromexan can be taken in tablet form, and takes hold in one day. Dicumerol takes hold slowly over three or four days. It keeps further clots from forming after that time, and can be continued for months if necessary.

Dicumerol also has a useful side action: it thins the blood without cutting its nourishment-carrying quality. This change in viscosity lets more blood flow through tiny, over-loaded detour

passages when the main blood vessels to an area are stopped up with clot.

In severe or moderately severe coronary heart attacks, a clot-stopping, blood-thinning programme saves many lives. It makes death, damage and later disability much less likely.

When a blood clot forms and breaks loose inside your veins, the clot floats along through bigger and bigger vessels until it goes through the heart. It is pumped with the blood into the lungs. Here the vessels get smaller again. The clot gets to a passage which it cannot pass. It sticks, blocking off part of the circulation through the lungs and setting off a nerve reflex which makes the other vessels in the lung clamp down. Since every drop of blood intended for every body organ must go through the lung first, this makes the circulation fail suddenly. Collapse follows, with death often close behind.

If you get into trouble with this kind of floating clot or vein clot, your doctor may well jump in with clot-stopping heparin, tromexan or dicumerol. He may be able to ward off the trouble altogether by getting you on your feet right away after surgery or keeping you moving

around in bed during an illness. Blood usually has to stagnate to clot in veins. Movement prevents this.

Some day you might break your hip or have some condition where long rest with little movement is needed. Then your doctor may tell you that your leg veins should be tied at the top of the thigh. This treatment, too, is aimed at keeping floating clots from striking you down. It is a simple operation, which can be done without even putting you to sleep. By picking a spot to tie the vein where there is a web of smaller vessels available to carry the blood, your doctor keeps you from having any great difficulty afterward. But blood clots which form in the leg veins can't get to your lung any longer. If they do form—and in some conditions they will do so in one out of three patients—they won't be able to do much harm.

Surgery for blood clots sometimes takes a much more dramatic form. A blood clot breaks loose and lodges in your lung. You go into shock. Medicines don't bring you around. At this point, emergency surgery still has a good chance of pulling you through. You may actually be snatched from the brink of the grave by an operation. The clot can be taken out of the lung.

Operations for taking out clots are much more common in another type of disease. When your heart is fighting an uphill battle, it gets bigger. It not only grows to help meet the load, it also inflates. The thin-walled antechambers whose job is to feed a

charge of blood to the main pumping chambers at each heart-beat may stretch to teacup size. Pushed out of shape like this, they cannot empty themselves. A clot often forms in the stagnant portion.

Of itself this clot does little harm. But pieces of it break off. They float through the bloodstream until they get into a passage too small for them. Each such stuck clot stops up the blood flow through an artery or branch. In various vital organs, little patches are cut off from nourishment and die or cease to work. If enough of any one organ is knocked out, loss of its function may bring death.

Although surgery for the clot in the heart itself is not usually done, the floating clots may be removed as soon as they get stuck. Surgeons save many limbs which in past years would have had to be amputated. When signs of stoppage of an artery show up—sudden pain, paleness, coldness, and weakness of an arm or leg—the surgeon has from two to six hours before the clot becomes stuck to the vessel wall or damage to the bloodless limb is permanent. Sometimes the part is frozen to stretch this period out, especially if the patient's condition needs to be built up before operation. The artery is opened and the clot sucked out with a rubber tube. Then the vessel wall is stitched up smoothly. In some cases this can be done even if the clot hits in the brain or some other vital organ.

When injury tears blood vessels so badly that there is a pool of blood, the area will stay sore until your body can carry all of that blood away. In very bad cases, this takes so long that scar tissue will bind muscle fibres and joint moorings together. Then stiffness and aching may linger on for years. Other damage, like sprained ligaments or pulled muscle fibres have long received the blame for these bad results. Doctors today know that the blood clot is to blame.

This kind of blood clot is being fought today with another new drug called hyaluronidase. Even a tiny amount of this material makes any kind of fluid spread through the tissues of the area and soak up into nearby normal blood vessels. By putting some under the skin where a quart-sized injection is to be made, doctors find the body comfortably blots up the whole dose in less than an hour, instead of the eight hours it used to take. The same speeding of the body's blotting power works on blood pools. In everything from sprained ankles to muscle bruises, doctors find hyaluronidase speeds healing and lessens later trouble. If leakage from torn blood-vessels

is a big factor in any injury you may have, your doctor will probably keep down blood clot formation by injecting this new drug.

Another approach to bruises and tears is now under trial. Several families of germs know how to make chemicals called streptokinase and streptodornase. These dissolve the protein scaffolding on which a clot is formed. In purified form, these chemicals can be injected into your system after you've had a beating or an accident. They keep leaked-out blood from staying in lumps within bruises and sprains. Bad bruises, black eyes and bone or muscle bruises can often be healed completely in two or three days with the aid of these new drugs.

Blood clots still play an important part in many deadly diseases. Your doctor can greatly cut this danger for you with weapons already in his hands.

There are few fields where medicine has moved faster in bringing a vital process under control. In the future, this mastery will keep you increasingly safe from abnormal blood clots.—(*Today's Health*, June, 1957).

Problems in Occupational Health

The outstanding problems of Industrial Health are:—(1) properly trained and qualified physicians for initiating and maintaining preventive and constructive medical programmes in industry are few; (2) confusion exists among medical educators and physicians in industry regarding both the objectives and the methods for providing the needed personnel; (3) undue emphasis upon the treatment of acute or life-threatening disease by most physicians has led many workers to expect free treatment of all diseases—these workers have little interest in and application for other types of medical services; (4) management, too, is often unclear as to what it expects of the Medical Department and has not yet learned to use the physician optimally.—(*Industrial Medicine and Surgery*).

HONEY: THE GOLDEN WONDER

DAVID GUNSTON

THE oldest human food is generally thought to be bread, or perhaps milk, but man knew the rich sweetness to be had from wild honey long before he learnt the art of baking or kept goats or cattle.

To this day, honey is the golden wonder of all our varied foodstuffs, the sweetest substance there is, and still the most perfect and most easily assimilated article of diet.

Honey has always supported man in his prosperity and in his extremity.

Even after many centuries of regular human use, honey still retains something of its early mystery, puzzling science by the very simplicity of its food value. Given all the necessary ingredients on a laboratory bench, a chemist can no more make honey than he can make milk; its great health-giving richness lies in its natural, living source.

In its original state in the flower, nectar is a watery fluid with a marked scent of its source-plant, but after transportation by the worker bee, and handling by the younger bees in the combs, where it is laid well mixed with supplies from countless other flowers, it becomes thicker, sweeter, more nutritious.

Hive honey differs mainly from the original nectar in having a lower water content and in the swift transformation of sucrose sugars into its two main constituent sugars, called dextrose and lævulose.

Various honeys show marked differences in their ingredients, just as different races of bees may produce individual types of honey from the same species of flowers, but these two sugars are always present.

Average honey also contains a small proportion of water, some albumen and cane sugar, minute quantities of dextrines, gums, volatile oils, digested fats and, depending on its clarity, numbers of pollen grains.

In addition, honey contains a small mineral content, the size of which bears little relation to its importance, comprising iron, silica, copper, potassium, sodium, sulphur, aluminium, manganese, chlorine, calcium, phosphorus, and magnesium, some of which have a beneficial effect upon the blood stream.

Flower pollen is rich in Vitamin C, richer in fact than most fruits, and variable amounts are retained in the resultant honey.

Honey is the richest and cheapest known source of lævulose, a substance normally more than twice as sweet as ordinary cane sugar, and the most important ingredient of the bees' gift to humanity.

Combined with the other simple sugar dextrose, lævulose helps the body to build up its vital reserves, of glycogen and blood sugar, which are transformed into energy and heat.

As pure honey is totally assimilated into the blood stream, it is therefore invaluable for

counteracting the effects of exertion—a fact known to athletes since the days of Ancient Greece.

Over all the other forms of sugar that we now know and use, honey may be said to have the unique advantages of being non-irritating to the digestive tract and providing an immediately available source of energy. In addition, it is gently and naturally laxative.

When properly ripened, honey immediately destroys all harmful bacteria which may settle upon it, even when it is directly exposed to contamination. It has the strange property of absorbing all the moisture in everything with which it comes into contact, and as bacteria cannot live without a modicum of moisture, honey swiftly kills them.

In a series of microscopical tests, the typhoid germ was seen to die within forty-eight hours of contact with pure honey, and the dysentery bacillus was dead after only ten hours' contact.

It is impossible to adulterate honey in such a fool-proof way that scientific detection is remote, although many attempts are made. If it is skilfully diluted with water, it merely ferments. If it is contaminated with added cane, maple or maize sugar, it will eventually separate out again.

If it is blended with other sugars, it merely thickens and turns solid. A fairly good test for pure, unadulterated honey is to pierce the lid of its jar and

then tilt the jar on its side and watch what happens. Pure honey will almost always trickle very slowly through the hole, making snaky coils on a saucer placed beneath, but diluted honey will not.

Led primarily by the fragrance, and then by the colour of the flowers, the bees (which are colour-blind to reds, by the way) set about making their honey food with an industry unsurpassed in the human world.

Three times more nectar than honey is originally gathered, and it takes the nectar from about two thousand flowers to produce a tablespoonful of honey.

A pound of honey safely encased in the hive represents the minimum of thirty-seven thousands bee-trips, or a mileage of perhaps fifty-thousand—twice round the globe—for a hiveful of insects making their average of one hundred pounds or so of honey in a season.

Yet from a single average flower one bee extracts only about half a grain of nectar.

In colour honey may vary from creamy-white and golden shades to blackish amber, purplish-brown or sea-green. The Ancient Athenians gathered their finest honey from the slopes of Mount Hymettus, where the wild thyme gave it a distinctive taste. Maltese honey, famed throughout the Middle Ages and still excellent today, owes its characteristic flavour to orange-blossom (the very name Malta, formerly Melita, derives from the Latin *mel*—honey).

The luxurious granular white honey of Narbonne, in France, owes its aromatic charm to sain-foin blossom, while the strange but toothsome wild honey of Germany's Black Forest is made from the gummy exudations of the pine trees there.

It is as a food that honey is so valuable and important, whether for adults seeking a sweetening agent with no restrictions attached to its use, for children building sturdy bones and teeth

with the finest carbohydrate foodstuff available, or athletes requiring an immediate reserve source of energy.

Honey has still to yield up all its secrets and is currently the subject of much medicinal research. Meanwhile, an ever wider use of honey in everyday diet combined with the strictest possible insistence upon quality and purity can have nothing but benefit to public health. (From *Wine and Food*, London

Pocket Cycle-Pump

A cycle pump which can be carried in the pocket and weighs only 5 ozs is being manufactured by a British firm. When closed, the pump has an overall height of 4½ in. It is made from shock-resistant, non-inflammable plastic with a self-lubricating nylon piston rod, and a spring of high-tensile steel.

The pump can be operated by foot or hand, and by using an adapter can inflate autocycle tyres. An electro-galvanized wire clip on the outside of the pump keeps the piston rod depressed when the pump is being carried, and acts as a stand to keep the pump upright when being foot-operated.—(*The Weekly Mail*, Madras).

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