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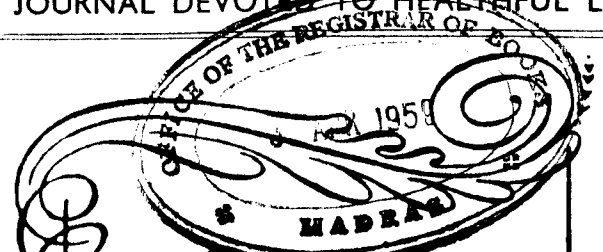
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HEALTH

FOUNDED BY THE LATE Dr. U. RAMA RAO

A JOURNAL DEVOTED TO HEALTHFUL LIVING



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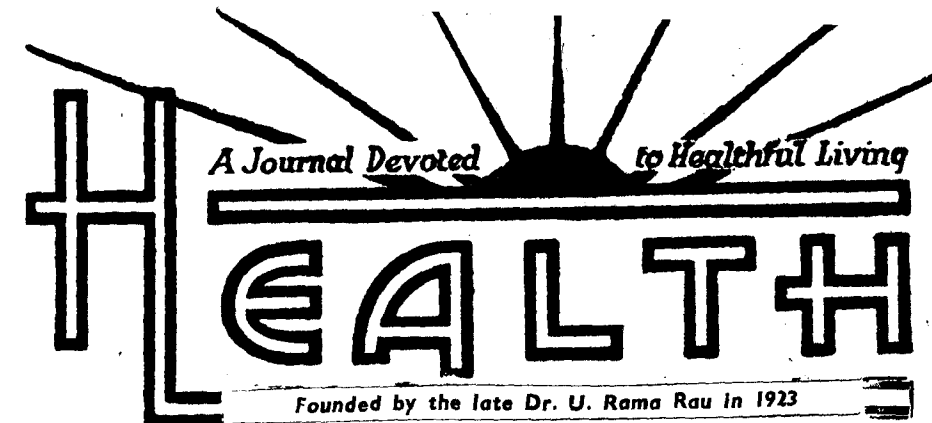
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SANITATION IN CATERING ESTABLISHMENTS

A GOVERNMENT-SPONSORED Bill to amend the Madras Public Health Act of 1939 was passed by the Legislative Council on the 16th February 1959. It provides for the prevention and control of communicable diseases, and for ensuring hygienic and sanitary conditions in catering establishments including itinerant stalls and mobile canteens. The State Health Minister Sri M. A. MANICKAVELU, in explaining the provisions of the amending Bill said that the Act of 1939 no doubt contained provisions for the prevention and control of the incidence and control of the spread of communicable diseases from lodging houses but it did not contain any provision on the same lines in respect of catering establishments. The Act of 1939 therefore, required revision so as to provide for the control and pre-

vention of spread of communicable diseases and in order to amend suitably section 287 of the Madras City Municipal Act.

It will be remembered that in 1950, Government appointed a committee to go into the question of sanitation in hotels and catering establishments. The committee had strongly recommended that Government should take powers under the Act to issue licences to control catering establishments. This recommendation had obviously been kept in mind in the amending bill now passed.

Several other recommendations made by the committee for the proper hygienic management and control of these eating houses and for the effective enforcement of the sanitary laws still remain to be implemented.

As it is now twenty years since the Public Health Act (1939)

was passed, it is time now to take stock of the extent to which it has been enforced and of the improvements in environmental sanitation and general health of the people that have accrued; if it is found on such appraisal, that the achievements so far are relatively small and that much ground has yet to be traversed, it would, in our opinion conduce to greater efficiency and quicker progress if the Public Health Act itself is carefully examined by a Special Committee and a comprehensive revision of the Act is effected by the Legislatures.

The enforcement of the provisions of the present Amending Bill, should certainly not be at the point of the bayonet, but should follow the lines of a gradual, sympathetic and human approach. Sympathy is no doubt required in administering and enforcing any legal enactment but it should not be misplaced. As a matter of fact, the poor vendors who prepare eatables in street corners will be made wise about the evils of vending exposed and contaminated food, *only* if they are strictly forbidden from plying their trade in insanitary and filthy surroundings exposed to dust and flies.

Leave it to Nature

Very large proportions of cases of acute tonsillitis and acute otitis media would seem to settle naturally and safely without the need for specific drugs and many of us might be using these drugs unnecessarily. Admittedly it requires a considerable amount of clinical courage at first to alter our set habits and to withhold drugs that we have been in the custom of using routinely with excellent results, but once the initial decision is made to wait and see for a day or two before using them it is astounding how many cases of acute tonsillitis and acute otitis media will recover on their own.—(*British Medical Journal*, October 10th, '58).

Again as Dr. A. LAKSHMANASWAMI MUDALIAR, the veteran publicist, doctor, and sanitarian who is widely and universally respected for his level-headed and practical views on men and matters said on the floor of the house: "We have become experts in passing legislation, but often fail to consider how far the provisions are carried out; the new amending legislation should first be tried in selected well-defined areas like municipalities and then only in course of time it may be extended to other areas. I wish to ask if the provisions of the existing Public Health Act are properly enforced? Even big hotels have not responded to modern concepts of sanitation and cleanliness and public conscience in this regard has yet to be awakened."

We have no hesitation in saying that Dr. MUDALIAR's suggestions and views are entitled to the greatest consideration and respect and our advice to the authorities at the different levels in this context will therefore be: "*Proceed cautiously but firmly yet kindly*" leaving nothing to chance; educate the caterers and their staff if necessary by short courses of training in cleanliness, hygienic methods and sanitation.

The Wear and Tear of Life

A famous medical theory propounded by Dr. Hans Selye holds that stress "the wear and tear caused by life" is the ultimate cause of all disease. In a laboratory at the University of Montreal, Doctor Selye and 53 assistants put in long and stressful days studying the intricate glandular and chemical mechanisms by which the body adapts and alerts its defences against disease, pain, and fatigue.

ONCE in a generation or so a revolutionary new concept like the germ theory or the cellular basis of life comes along to give new directions to medical thinking. In our day, no idea has stimulated so much medical research as Dr. Hans Selye's theory that "stress is the fundamental cause of all disease."

What is stress? Doctor Selye calls it "essentially the rate of all the wear and tear caused by life." You can't avoid stress. It's an inescapable part of living. A cold, a bill, sheer joy, an argument, a wedding, a buzzing alarm clock, a million and one big and little things chip away insidiously at our limited stores of energy. We can make withdrawals from the energy bank account which nature gave us, but we can never make new deposits.

Stress first "alarms" the body and stirs its defence mechanisms, particularly the glands and hormones and nervous system, into action. The next stage is *adaptation* when the body fights back. The final stage is *exhaustion*. Glands give up the struggle and symptoms of disease appear—any disease, but particularly some of our worst "degenerative" ones, such as arthritis and heart and kidney ailments.

The apparent cause of illness is often an infection and intoxication, nervous exhaustion, or merely old age. Doctor Selye says: "But actually a breakdown in the interrelationship of the various hormone products of the body's glands seems to be the most common ultimate cause of death in a man" and he adds; "I have never known a person who died simply of old age"

Heart of the stress theory is that the body has a unified defence against disease, pain, and fatigue. This is generalization broad enough to include all diseases as a result of defence breakdown. Some aspects of the stress theory are not completely proved or universally accepted. But the theory rests upon meticulous laboratory work and objective scientific observations, not only by Selye and his group but also by many hundreds of researchers who probe into the vital works of the endocrine and nervous systems.

Doctor Selye has caused heart, blood vessel, and kidney diseases in animals by giving hormone injections indicating that the diseases were caused by stress which unbalanced the adrenal glands, and he has checked the same diseases by restoring hormone balance. The great alerters and defenders of the body against

stress appear to be the pituitary and adrenal glands, particularly the cortical adrenal hormones, which have dramatic medical uses in the management of arthritis and inflammatory diseases.

The man whose name is synonymous with stress is a lithe, slim, 51-year-old scientist with graying blond hair and gray eyes. He had spent a long day doing animal autopsies in the laboratory (with the help of some of his 53 research associates) when I met him late in the afternoon in his office in one of the gleaming white buildings of the University of Montreal on the slopes of Mount Royal. His oversize Office is equipped with red leather chairs, revolving book-cases, the latest in intercommunication equipment—a measure of the distance the stress theory has come since the middle 1930's when it received virtually no medical interest or support. It was *'touch and go'* whether the theorist could continue his work at all. The turning point came with encouragement and a grant of \$ 500 from Sir Frederic Banting of Toronto of insulin fame.

Doctor Selye relaxed in a revolving chair and was quick to strike a kitchen match for a visitor's cigarette. He himself is a pipe-smoker, a gentleman of wit and humour in nine languages. During our conversation he spoke in French to his secretary and in strange tongue to a white-gowned young man who came in with some laboratory records.

"Do you know what we were speaking?" Doctor Selye asked. "Hungarian"

For a man who advises balance between work and play to minimize stresses, his frequent 12 hour work-days, his prodigious literary output, the thousands of miles he covers each year giving medical talks in this country and abroad may seem inordinately stressful. He has tried to be lazy and failed. What are his recreations?

"Playing with my children reading, listening to music, travel." He has a daughter and three sons, the eldest nine. Gathering around Dad's bed to play a game he invented, is a night-time ritual, one of the ways by which Doctor Selye lets his mind "run down" after the stresses of a busy day. He draws a line on a sheet of paper, then another line some distance away and so on until the lines are finally joined and the shape of the object he is drawing becomes apparent. The youngsters compete in guessing what he is drawing before the lines are joined. His wife the former Gabrielle Grant doesn't try to cure her husband of stress but helps him to enjoy it. Walking is a favourite family recreation, and one expedition left a mark of stress which Doctor Selye carried in the form a visible limp on a lecture trip to Buenos Aires. "I had a mishap while climbing a tree on the McGill University Campus" he explained. He was after a tree branch which looked just right for making a bow and arrow (he got the branch).

The books in his office are part of the world's largest library on endocrinology. He himself is

author of half a dozen thick books and hundreds of medical papers on the subject, and he has lost count of the medical talks he has delivered. He is a superb platform speaker who dares to let his philosophy show through and he thinks it sad that "to be called a philosopher, when applied to the contemporary physician, has come to be the greatest of insults." He is now writing a novel about a young researcher, a literary form new to him which may duplicate the popular success of *"The Stress of Life"* a fascinating book in which he very humanly tells of the development of his now famous stress theory.

If stress is unavoidable and each exposure leaves its scar, it is also the spice of life. Dr. Selye is anything but a gloomy prophet.

We can learn a great deal

about how to keep the damaging side-effects of stress to a minimum. The secret of life is successful adjustment to ever-changing stresses.

How can we adjust?

The lesson seems to be that as far as man can regulate his life by voluntary actions, he should seek to equalize stress throughout his being, by what we have called *'deviation,'* the frequent shifting over of work from one part to the other. The human body like the tyres on a motor-car or the rugs on a floor, wears longest when it wears evenly. We can do ourselves a great deal of good in this respect by just yielding to our natural cravings for variety in everyday life. We must not forget that the more we vary our actions, the less any one part suffers from attrition.—(*Today's Health*, January 1959).

Stop Heart Attacks, Strokes

Arteriosclerosis—and its main killers, heart attacks and strokes—is the leading cause of death in the United States, reports the National Health Education Committee of New York City. The committee, which includes Drs. F. J. Stare, Samuel A. Levine, H. B. Sprague, and Paul Dudley White, says these diseases accounted for about one million victims last year.

Modern research, however, provides hope for improved treatment and the possibility of preventive measures against these ailments. Check these factors:—

1. *Heredity*...did either of your parents or grandparents suffer from or die in the prime of life or earlier from these diseases?
2. *Overweight*: are you more than 10 pounds above your ideal weight? Your doctor can tell you what is normal for you.
3. *Elevated blood-pressure*.
4. Abnormally elevated blood cholesterol levels and
5. Excessive cigarette smoking.

If you have a strong family background in these diseases, it's important you minimize the effect of the other four factors. You'll lessen the chances of having an attack.

Hard work itself, including stress and strain, does not cause the disease. In fact, moderate physical activity appears to lessen the hazards.—(*Today's Health*, January 1959).

SINUS TROUBLES

Sinusitis may easily follow if a simple common cold is not looked after properly and in time.

THE nose is a very important organ, because it is the entrance to the whole breathing apparatus. The air is directed round the nasal passages by the delicate curved bones, covered with soft mucous membrane. Thus it is warmed and also becomes moist. The warm moist air then goes down the windpipe or trachea to the bronchial tubes in the lungs, which gradually get smaller and smaller until they end in the little air sacs called alveoli. These alveoli have delicate walls of microscopic thinness, through which the circulating blood can take up oxygen from the air and give up carbon dioxide gas and other impurities. It is therefore, very important indeed that the nose should be healthy and not obstructed. The nasal passages are lined with a membrane on the surface of which are tiny hair cells called cilia. These do not move to and fro but their movements are constantly directed backwards, so that the thin layer of mucus on the surface is pushed backwards towards the back of the nose and the throat.

The nasal sinuses are large air cells with bony wall connected with the nasal passages into which they drain through small openings. There are two frontal sinuses, one on each side above the eyes the ethmoidal sinuses form a group of air cells above and between the eyes and extending along the base of the brain. The sphenoidal sinuses are even

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farther back than the ethmoidal sinuses.

The largest sinus is the maxillary sinus, which is about the size and shape of a hen's egg. There is one on each side in the cheek below the eye. The precise purpose of all these nasal sinuses is still argued about. They have been thought to be a means of lightening the bones of the skull. Others suggest that they are rudimentary structures like the appendix, which in the lower animals were connected with their sense of smell—much keener and more important than in human beings. The fact that they are resonators of the human voice is a minor function that they undoubtedly possess. They have a protective function, just as pneumatic tyres filled with air are a better cushion than solid tyres, so are the nasal sinuses filled with air a better protection to the eyes and the base of the brain than solid bone alone.

Nasal catarrh may be due to two quite different causes. One type is caused by infection with bacteria or viruses resulting in the common cold, for example. Such infection may extend from the nose into the nasal sinuses. The other type is caused by so-called *allergy*, which is not an infection,

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but a reaction to some upset in the chemistry of the body.

Nasal allergy, such as the well known hay fever, can be caused when the mucous membrane is irritated by the pollen of grass or other plants or flowers. Or it may be due to some error in diet, perhaps to much carbohydrate, or some article of food that disagrees with the particular person, such as milk or wheat flour is at fault. But in some cases an allergic reaction may even be caused by going from a hot to a cold atmosphere or from a cold to a hot room.

In most cases of the common cold in the head the nasal sinuses are affected to some extent. Their lining membranes become swollen, and there is an exudate of mucus. But all this usually subsides when the cold disappears. When an infective nasal catarrh persists it is usually due to sinusitis. Nasal sinusitis may be catarrhal or suppurative, depending on the germs involved and the severity of the infection. Only one third of the cases of nasal sinusitis are suppurative, that is, with a discharge of pus or matter. Most cases are catarrhal, arising from an extension of the common cold in the head into the nasal sinuses. This spread to the sinuses of the common cold is quite usual. But the sinusitis itself becomes of importance only when the opening of the sinus into the nose gets blocked.

What causes pain and headache in sinusitis is not the infection itself, but the blocking of drainage from the sinus. Often in an acute sinusitis, all of the

sinuses are affected, but the one most generally infected is the maxillary sinus.

In the treatment of acute nasal sinusitis, even a comparatively slight surgical procedure as puncture and drainage of the maxillary sinus may set up such a serious complication as inflammation in the bone itself.

So first of all one tries to open up sinus drainage by means of nasal sprays, such as one half per cent, ephedrine or penicillin aerosol. Friar's balsam or menthol steam inhalations help. While at the same time the infection is controlled by doses of penicillin by injection, or sometimes one of the newer antibiotics by the mouth. Heat helps the pain, a hot-water bottle or short wave or infra-red rays if available. Sometimes an ice-bag is preferred. Headache is relieved by aspirin or similar simple drugs. X-ray examination will show which of the nasal sinuses are involved. Most usually it is the maxillary sinus first, the others usually following upon this.

But once the acute nasal sinusitis has settled down, and the temperature has been normal for forty eight hours or more, then the maxillary sinus affected may be punctured, under local anaesthesia, washed out with simple saline solution, and drained. This may have to be repeated two or three times, but that will usually clear up any recent infection. An old standing suppurative infection may require more radical surgical measures, but sometimes even an old infection will yield to repeated punctures and the

saline wash-outs. Penicillin and other solutions have sometimes been advised for this. In some cases an indwelling catheter is inserted into the maxillary sinus for repeated treatment.

But with any luck you will be

spared all these things especially if you take the common cold seriously and get it better by ordinary common-sense care, long before there is any question of a sinusitis arising.—(*Family Doctor*, December 1958).

CANDIED FRUITS

By J. R. FARRINGTON

IN what was once an ancient convent near the Flower Market in Nice, it is now well over one hundred years since the gentle rustle of the nuns' robes yielded to the busy feet of white-clad confectioners, and figures of saints were replaced by rows of burnished copper pans.

Secularized in the Revolution, the convent became the *confiserie* of the Auer family, in whose hands it remains today. The tempting modern shop in the Rue St. Francois de Paule gives no indication of the romance that lies behind.

Nice is the home of the hand-made candied fruit industry, and a few families, jealously preserving the centuries' old methods, still produce a confection which is famous throughout the world. To the connoisseur the difference between the product of these master *confiseurs* and machine-made imitations may be likened to that between the mass-produced garment and the model of Parisian *haute couture*.

The craft is very old. The Romans were partial to oranges preserved in syrup, and the tables of the early French kings

were provided with fruit candied in honey.

The main object of the hand method is to preserve unimpaired the full flavour of the ripe fruit. There must be no trace of excess syrup or crystallization. To ensure this, at least fifteen separate operations, spread over a period of up to six weeks, are necessary.

First, the fruit must be picked exactly at the right stage of development, this being ensured by close co-operation with growers who specialize in this form of cultivation.

Miniature figs, tangerines, and pears are grown expressly for the trade. That lovely little dwarf orange, the "*chinoise*," has been produced solely to end its days as produced as perhaps the daintiest morsel in the box.

On arrival at the *confiserie*, each fruit is carefully examined for any imperfections. They are then placed on trays and submitted to sulphur fumes in a chamber, to arrest maturity and to destroy any fungus.

After immersion for two hours in a bath of sulphuretted water, the fruit is washed in earthenware bowls for eight hours.

The next process is piercing with an instrument consisting of fine copper wires embedded in corks. This is to allow syrup to penetrate to the heart of each fruit. At this stage pips or stones are removed, necessarily by hand and with a minimum of damage.

The delicate stage of immersion in boiling water, known as "whitening," is now reached and the fruit is cooked. After this follows a period of twenty-four hours in cold water, which is frequently changed.

After drying on grids, the fruit is now placed in copper pans and covered with syrup at a specified temperature, then brought to the boil and transferred to earthenware bowls for one day.

The syrup is next drained away and the process repeated for periods varying with each type. For tangerines there are seven further syrup treatments spread over 26 days.

The finished fruit is now stored in its syrup to await packing.—(*Milestones*, London, via *World Digest*, December 1958).

They Watch Morals

The Public Morality Council, in its recently issued Annual report, hits out a nudity show. "The danger to young people witnessing such entertainments cannot be over-emphasized. The accent on sex is made in such a way as to present it in a most harmful eroticism which does violence to its true nature, which is essentially good. Wise and informed guidance and information on sex is of paramount importance to our young people. It can never be had from the gutter.

The council's sub-committee reviewed 64 stage shows and recommended 25 of them; another 15 were "considered unobjectionable," 24 were criticised on the ground of unhealthy sex exploitation.

The cry for the abolition of the office of Lord Chamberlain they say is "generally prompted by a particular interest and doesn't represent the considered opinion of Stage Administrators generally. If Lord Chamberlain were to go, there would be chaos, for the responsibility for permitting plays would then rest with local licensing authorities, and plays permitted in one locality might be refused in another."—(*World Digest*, February 1959).

Colds

Spectacular advances have been made in medicine in the past year but the common cold still baffles scientists. It's an infectious nuisance-disease that is responsible for millions of man-hours lost each year. Although there is no way to positively avoid the disease, you take some precautions against it.

Look out for sniffles, sneezes, coughs, sore throat, aching muscles, fever, running nose and eyes. When you get these symptoms take care. Stay in bed if possible. Drink plenty of liquids.

Don't spread the germ. Avoid contact with others. If possible, miss work or school until you are well on the road to recovery. See your doctor if the symptoms persist or if you have a high fever he'll probably prescribe drugs (nose drops, throat sprays, fever reducing remedies) that will help you feel better while you have your cold.—(*Today's Health*, January 1959).

WHAT CAN I DO ABOUT CONSTIPATION?

[In most cases it can be put right and many people who worry about it are not really constipated at all].

THE Woman who asked me this question has nearly always been constipated a very long time. She has tried all the laxatives, all the pills, most of the diets. She may even have had abdominal massage and back twisting exercises, until finally she comes to see me and says in despair "What can I do about my constipation?"

Of course there are people who have only just become constipated. Normally you could set your watch as they pull the chain but for three, four, five, days nothing at all has passed, in spite of aperients, nauseas and griping pains.

This is quite a different problem, for such patients may have some form of intestinal obstruction. But giving them the traditional dose of castor oil may be murderous, bursting an already diseased or obstructed bowel or appendix. The routine treatment is by gentle enemas, given by a trained nurse who will easily and simply cure the case. If not she will shake her head and intimate that it is up to the doctor to make a different diagnosis or hand over to a surgeon.

But Mrs.....sitting in the patient's chair isn't like that. She is not particularly ill; she just can't get her bowels open. Now she may be deluding herself. Nature has not designed everyone with a twenty-four hour clock. It is natural for

some to evacuate every two days or even every three. To expect such a bowel to emulate the sprinters among its contemporaries leads only to frustration. There are two kinds of chronic constipation, easily sorted out if a patient is given a meal containing barium and then X-rayed. In colonic constipation, the stuff just drags its weary way slowly along the bowels. In the variety with the charming name of dyschezia, everything moves on normally till it reaches the last station before home, the rectum. It fills up, giving its owner no sensation at all that it desires to be emptied.

Now there are two normal mechanisms which should prevent all this and which have gone wrong in Mrs.....who had colonic constipation and in Mrs.who has dyschezia. The first is called the gastro-colic reflex. The colon is a sluggish thing which waits for a signal before shrugging its contents on. That signal is a meal. As soon as the food enters the stomach, distending it, a nervous impulse is sent to the colon, which itself gives a sympathetic heave and shifts its contents into the rectum. Hence the normal desire to evacuate after breakfast.

Savages usually evacuate like this after each meal and don't seem to mind. But as this became inconvenient to civilized

man the gastro-colic reflex got a bit stultified, while it does a really significant heave once a day. In some people only once in two days.

After breakfast.—The other mechanism is fired off by distension of the rectum. Normally this is empty from the last bowel movement till the next gastro-colic super-heave, after breakfast the next day. When it is distended the rectum sends a nervous impulse to the brain, asking to be emptied without delay. If no notice is taken two things may happen. First the distention may bring on headaches and depression. But if no notice is taken day after day, month after month, the rectum shrugs its shoulders and gives up the struggle. It becomes a remarkably tolerant receptacle.

So Mrs.....trouble is a poor gastro-colic reflex. Mrs.....is an insensitive rectum. Actually both ladies feel pretty well till they are misguided enough to take a strong purge. This smashes up their rather hard well sealed off contents, irritates the bowel wall and they feel horrid.

The prevention of constipation boils down to the cultivation of regular habits. Assume that your gastro-colic reflex has worked after your breakfast kippers and it probably has to some extent. So try and see what you can do. Don't assume your distended rectum will tell you anything. Through neglect the poor thing won't go at the same time every day and by and by your poor reflexes will start to recover.

Taking masses of aperients may work at the time, but they can't cure you. Because they only annoy your bowel linings, which become less sensitive.

Still you can help. At your fixed time have a small glycerine enema with two teaspoonfuls of glycerine; you can use a glycerine suppository, though it is not quite as effective.

You must also drink plenty of fluids. And you want a certain amount of roughage. All-bran for breakfast if you like as so many do. Spinach, greens for lunch. Don't overdo it, but do take a reasonable amount.

Keep your abdominal muscles in good trim by regular exercise. Cycling and towing are specially good, skipping ropes and hoops are fine. Massage your tummy with your fists if you like, using a clockwise motion.

Liquid paraffin? Gallons and gallons of it are swallowed, softening the motions a bit but not helping very much. And it is said to prevent your vitamins being absorbed; so you are probably better off without it. Unless you have been constipated for fifty years you can re-educate your inside in time.

If you just can't manage without help, well, the only reasonable laxative in my opinion is senna, and not too much of that. You may soak six pods in cold water all day and drink the infusion at night well diluted. Use it only occasionally and try gradually to leave it off.

Form good bowel habits. That is the real answer to constipation.

—(Family Doctor, November 1958).

HOW TO EASE THAT COUGH

COUGHING is a defence mechanism. If anything irritates the very sensitive lining of the voice-box or wind-pipe the cough reflex is brought into action without a moment's thought or hesitation. When a crumb goes down the wrong way and enters the wind-pipe instead of the gullet, at once the irritation causes a spasm of coughing. And with any luck the cause of the trouble is ejected. Coughing cleanses. It keeps the smaller air passages clear of the secretion known as mucus that forms within them. This would stagnate and cause trouble if there was no way of moving it. But coughing can do some harmful things, if it gets out of hand. It can interfere with the sleep of those who cough and those coughed at. It can damage the lung by making it become over-distended. If a cough is very violent it can cause a momentary blackout, because it interferes with the blood supply to the brain.

Tens of thousands of pounds a year are wasted on useless cough mixtures; on preparations which do nothing more than irritate the lining of the stomach.

But two types of *cough medicine* are useful. A dry useless cough can be stopped by sedative cough mixture. A cough which is doing a useful job can be stopped for a few hours at night in the same way, so as to

allow some uninterrupted sleep. The second type of cough medicine is used to loosen sticky, tenacious sputum that causes spasms of violent coughing. A well chosen mixture often taken in hot water can bring great relief.

Lozenges will do very little for a cough that started in the lungs or the bronchi. But a soothing cough lozenge may well help the cough and tickle that start in the throat.

A *spasm of coughing* may be eased by a hot cup of tea. Better still is a cup of hot water to which a pinch of salt and two pinches of baking powder have been added.

Hot black currant tea can be very soothing to a cough. *Steam inhalations* are also useful. The steam from a teaspoonful of Friar's balsam in a jug of almost boiling water inhaled through the nose and mouth is a well-tryed home remedy. But don't make a towel into a tent covering your head and the steaming jug. Make the towel into a funnel over the jug and apply your nose to the top of the funnel and do beware of scalding your nose.

Children with acute bronchitis often have dry, useless harassing coughs. Usually the air of sick-room is too dry and makes the cough worse. A kettle of water gently steaming, or a bowl of water in front of the gas-fire will help to keep the air moist.

The old fashioned method of rubbing the chest with camphorated oil is soothing and well worth trying. Plenty of fluids should be given. A hot kaolin poultice to the chest often brings relief, but do test it on your own elbow first. If it is too hot for you it is certainly too hot for the child.—(*Family Doctor*, via *World Digest*, February 1959).

A woman walked into a millinery shop and pointed out a hat in the window, "that red hat, with the purple berries and yellow feather" she said. "Would you take it out of the window for me."

"Certainly, Madam" the assistant smiled.

"Thank you" the woman said turning to leave the shop "the horrible thing bothers me every time I pass."—(*Liberty-Toronto*).

FATE WALKED IN CLOVER

An angry farmer, a dead heifer, and a pile of spoiled clover set Dr. Karl Paul Link on the trail of a mystery of blood. Identification of the "Clover Criminal" led to the discovery of anticoagulant drugs now used in the management of blood vessel diseases.

BLOOD IS THICKER than water but it can be too thick, for one's own good if it coagulates inside blood vessels. How does normal blood "know" that it must clot when it oozes from a pinprick in your finger, but that it must never clot inside your body?

Sometimes the wonderful mechanisms which thicken blood on the outside but keep it fluid on the inside do go wrong. Disturbances of coagulation are associated with some of our most disabling and deadly diseases; coronary thrombosis or "heart attack" in which arteries that feed the heart muscles are plugged or narrowed by a clot; or any other obstruction of blood vessels caused by internal clot-formation.

Today, anticoagulant drugs which help to prevent or control such dreaded ailments by tiding a patient through a crisis or by long-term use to forestall recurrences are widely and discriminatingly used by physicians and surgeons. Yet the clinical history of these drugs is scarcely a dozen years old. It begins with one man and his students who were concerned about sick cows. They had no idea at first their work would turn up a new class of drugs of great medical importance and give great impetus to studies of blood and circulation in health and disease.

On a blizzardy afternoon in February 1933, a farmer drove to the University of Wisconsin with a strange cargo—a dead heifer, a milk can full of blood that would not thicken, and 100 pounds of spoiled sweet clover that he had been feeding his cattle. The State Veterinarian's office was closed and by pure chance the despairing farmer came to the biochemistry building and met Dr. Karl Paul Link, Professor of Chemistry.

The problem was all too familiar. Agricultural scientists had known for some years that spoiled sweet clover caused a strange hæmorrhaging disease in cattle. The animal's blood lost all its clotting capacity and they bled to death. But all Doctor Link could tell the farmer was to stop feeding spoiled clover and possibly transfusions could save some of the herd.

The farmer's hopeless departure for home in the teeth of a blizzard made an immense impact on Doctor Link. What mysterious substance in spoiled clover caused the symptoms? Nobody knew. It was a challenge to a chemist, and the beginning of an arduous investigation beset with difficulties, disappointments, exasperations and technical obstacles which culminated six years later in a few crystals of a chemical compound on a microscope slide.

It was *Dicumarol*, first of the synthetic anticoagulants. The clover-chemical which caused hæmorrhagic disease in animals proved to be of surpassing value in human beings confronted with the danger of blood-clot formation. Use and study by thousands of doctors developed safeguards, dosages, contraindications, and important techniques for measuring the clotting factors of the blood.

Even today, the way in which anticoagulants work is not wholly understood. They do not dissolve blood-clots, but apparently overcome the process which initiates thrombus formation, and help the patient to tide over a crisis while his circulation is building new blood vessel connections and reabsorbing the original thrombus.

Karl Paul Link is required meeting for any one who thinks a scientist is a stuffy fellow, a cautious, taciturn and ultra-dignified inhabitant of an ivory tower. He is a bit over six feet tall, with a high brow and a thick thatch of hair—never sullied by a hat—which is at loose ends around the back of his head.

I talked with him in his New York hotel room a few days after he had been the main speaker at a dignified and important medical meeting for which he made unusual concessions to convention. He wore a tuxedo—with a bright red vest and brass buttons.

He was easily the sartorial standout at a Lasker Medical Awards luncheon in honour of men who had made distinguished

contributions to medicine. Of the half dozen eminent scientists from all parts of the country, Doctor Link was the only one who wore a lumberman's wool shirt of green and red plaid. There's a legend on the Madison campus that he teaches classes in pyjamas!

"Oh, that" he said, "one morning the thermostat at home wasn't working, and I threw some things on over my pyjamas and I guess I forgot to take 'em off, that's all!"

Doctor Link is one of 10 children all living, the eldest 72. His own children range from four to 20 years. They and his forbearing wife think nothing of waking up to find chickens in the bath tub or caged rats in the garage, participants in some experiment. The Links live in the country and "feed all the birds in the neighbourhood. I get all the birds. The neighbours can't figure out what I feed 'em." (Doctor Link gets up at 4 a.m.). "But if I don't feel like working I don't get up."

He says what he thinks with engaging warmth, and his public speeches like his conversations are sprinkled with salty allusions. The isolation of dicumarol in his laboratory in the dimness of dawn on June 28, 1939 was a dramatic moment in medical history, but there was no shouting or back-slapping. An associate, H. A. Campbell, had worked all night to crystallize the drug and was asleep on a lab-couch when Doctor Link arrived. The door was guarded by a picturesque character who may be called Doyle.

"As I walked into the room, Doyle was taking a nip from a bottle whose bottom layer consisted of carpet tacks, the upper layer of 95 per cent alcohol" Doctor Link remembers. "Without the flicker of an eyelash Doyle said to me, 'I am celebrating Doc. Campy has hit the jackpot.'"

Along with scholarly papers on molecular structures and prothrombin times, Doctor Link's brief case is likely to contain two or three bananas, a nutritious fruit which, he points out, comes in its own sterile package and needs no cooking.

Beneath the irrepressible vitality of a free soul is the integrity of a dedicated scientist. Doctor Link and his students have continued to seek new anticoagulant

compounds which might overcome certain disadvantages of dicumarol and of closely related drugs which followed it.

The newest anticoagulant to come out of his laboratory is Coumadin sodium or Warfarin, the latter a name coined by Doctor Link to incorporate the initials of Wisconsin Alumni Research Foundation. Extensive medical experience indicates that Warfarin overcomes many of the drawbacks of Dicumarol and is five to ten times more potent.

Doctor Link's philosophy is expressed in a sentence he dropped casually in conversation "when you are attempting to do mankind some good, fate will be on your side."—(*Today's Health*, January 1959).

On Editors

Sometimes we feel like this, too! We quote from an editorial in the *Journal of the Royal Naval Medical Service*, Volume XLIV, Winter 1958, No. 1:

"Amateur editors of the journal do not have an enviable task. They are not given a course in editing and they do not, unfortunately, receive the unanimous support of medical and dental officers. Brickbats arrive from time to time, but very little in the way of constructive criticism or encouragement. However, if they reap scanty rewards on earth, they reap a much more valuable reward in Heaven. The outgoing editors are grateful for permission to publish the following lines which, they feel confident, apply to all medical editors."

The Editor stood 'for the Heavenly Gate
His features pinched and cold.

He bowed before the Man of Fate,
Seeking admission to the Fold.

"What have you done," St. Peter asked,
"To gain admission here?"

"I was the *Journal's* editor, Sir,
"For many a weary year."

The pearly gates swung open wide,
As Peter pressed the bell:

"Come in and choose your harp!" he cried;
"You've had your share of H.....!" (*Hell*).

—(*Military Medicine*, November 1958).

Try These and Keep Fit

Diet and the heart.—Although not directly involved by digestion, the heart is sensitive to the blood demands made on it by the digestive organs. In heart trouble, it pays to have simple, easily digested meals; a minimum of rich, fatty foods, fried fare, rich gravies, and richly spiced dishes. Calcium is invaluable to a strong heart beat, and foods such as milk, cream, cheeses, almonds, and leafy greens are important. Wheat germ oil is also strengthening to the heart.

Nerves depleted.—Make apples your favourite fruit. Have them freshly grated for breakfast with ground almonds, a pinch of nutmeg, and your favourite whole grain cereal. Have them baked for lunch or dinner. Drink apple juice often, tea, and cocoa. Use eggs freely and have salads and leafy greens every day. Learn to relax and rest at intervals during the day.

Caught a cold.—Don't feed it, starve it. Get a hot foot-bath, retire to a warmed bed, sip the juice of a grapefruit which has been warmed in the oven, and repeat whenever hungry or thirsty, until the stuffiness goes. Then come back to food gradually. Often works in twenty four hours.

You can eat egg-shells.—Dry the clean shells in the oven and crush to a powder. Add small doses to bread, cooked dishes, rice, puddings etc. and boost

your intake of calcium. Excellent for growing children, and adults who do not drink as much milk as they should.

Constipated?—Abandon all denatured foods, especially white flour breadstuffs, biscuits, cakes, etc., white rice and lard, white sugar and synthesized, packeted foodstuffs. Eat at least two kinds of fruit, a salad of three or four vegetables and a serving of two cooked vegetables every day, and give place to black molasses, dried yeast, and olive oil in your diet. Chew all food very thoroughly and finish each meal with one or two dried fruits, prunes, dates, figs or apricots.

Cold feet and indigestion.—Cold feet mean diminished blood circulation and nerve activity and reflect in poor circulation. They can contribute to constipation and are frequently unsuspected causes of headache. Give your cold feet a hot bath and vigorous massage with oil-moistened hands before you eat, and you will soon note the difference in your digestive efficiency.

Overweight.—Cut your starchy foods—bread, biscuits, cakes, confectionery, potatoes, macaroni etc., by one half. Replace in bulk by fresh fruit or vegetables. Put the salt cellar away, and leave the table immediately you have eaten. There will be no spectacular weight-fall but you will start to lose three or four pounds a week and it soon adds up.—(*Nutrition in Good Health*, London, January 1959).

TREATMENT FOR NEEDY FEET

By MARGARET ATFIELD.

IN the days of old, transport consisted of the coach for the richman, the humble donkey or ass for the less richman and for the poor man that to which we refer as "Shanks" Pony, or just plain walking.

Modern transport facilities tend to make us lazy, with the result that our feet do not get enough correct exercise. Yet even so, they are obliged to bear considerable burdens.

A corn is the response of the tissues to pressure from a part of the boot or shoe, the skin forming extra cells to protect itself from the shoe. If taken in time, a corn need be no more than an irritation or slight pain, in which instance it can be trotted to the nearest chiropodist for removal. If neglected, however, it can become a septic condition, when you would need to consult your doctor.

It is an amazing thing, but most of the trouble with our feet can be traced to neglect. If a nail is found to be what is termed "ingrowing" do not attempt to cut it out yourself, as there can be very serious consequences from such an action. Have it attended to and treated by a professional man or woman, who understands such matters. I would emphasize this point very strongly, having seen unfortunate cases caused by self-treatment.

Nails suffer badly from cramping shoes. They can also be severely damaged by dropping a heavy object upon them. Or by

stubbing them against an obstacle while walking barefooted. Bacteria easily gain an entry if there is the slightest tear or abrasion, causing pus, inflammation, and perhaps even ulceration.

Cleanliness cannot be too strongly stressed in dealing with one's feet. Any inflamed toenail, or any area which is inflamed needs immediate attention, without which it could become quite serious. An ingrown toenail can be caused by careless cutting and to deal with it one needs a pair of nippers especially designed for such a purpose. Such an instrument is stronger and will guarantee a clean cut.

Our feet should, of course, be treated in much the same way as our hands, because, physiologically they are practically the same. Each evening after the shoe and sock, or stocking, have been removed, the feet should be washed and thoroughly dried, particular attention being paid to the skin between the toes. Afterwards a dusting of talcum powder should be applied.

Cracks between the toes can become very sore and inflamed, although there may be no condition of disease. When one's feet are encased in socks, and then in shoes, the perspiration between the toes has no way of evaporating as no air can penetrate, and the consequence is a maceration of the skin.

With some people there is even bleeding, which makes walking

an effort. Professional advice should be sought for this, but I have found that a mixture of zinc oxide with castor oil clears up this trouble in most cases, in a short while.

Foot exercises are good for toning up the various parts; skin, bones, nerves, muscles, blood vessels etc.

Men and women in the services are taught to walk at what one wise-cracking soldier once called "five to one" so let's go a bit further and call some walkers ten to two. This is an exaggeration of course, but I have seen many men and women walking in this

fashion, which often denotes that the owner of the feet is suffering from fallen arches, and in some cases the arch is as flat as the proverbial pancake.

It is also a good thing to let our feet have as much air as possible, *by going without shoes whenever we can* such as when we are in our own room. This is known as the air bath. Exercises such as walking on one's toes, around the bedroom before retiring, are beneficial to both the legs and the feet. These can be done before the shoes are put on in the morning as well as before bed at night. —(*Good Health*, January 1959).

APPLES AND DENTAL DISEASES

AN apple a day may not keep the doctor away, but it may help keep the dentist away judging from a report by G. L. Slack and W. J. Martin (*British Dental Journal*, Nov. 18, 1958, 105: 366) based upon their finding in a group of 171 children, 90 of whom were given apples to eat after every meal and after eating anything between meals; the remaining 81 acted as a control-group. At the end of two years the incidence of gum disease was significantly lower in the apple-group than in the control group. The incidence of caries was also lower in the apple-group, but caution is necessary in the interpretation of the significance of this, as before the investigation started the incidence of caries was higher in the control group than in the apple group and there is there-

fore a possibility that the children in this group were more prone to caries than those in the apple-group. It is concluded that the results of this pilot study lasting two years indicate that a large scale study for a longer period would be worthwhile. It is stressed that 'only apples that have crisp firm flesh can be considered as an aid to oral hygiene.' The action of the apples appears to be twofold. The flow of saliva is stimulated by the low pH of the apples and the mastication of the fibrous apple fragments, whilst the mechanical cleaning action of the apple sweeping over the teeth and gums in the presence of increased saliva flow removes debris and stimulates the tissues. —(*The Practitioner*, London, January 1959).

Problems in Protein

IDENTIFICATION of the various essential vitamins and the recognition of diseases caused by their lack has resulted in a significant decrease in the incidence of vitamin-deficiency illnesses in many parts of the world. The availability of synthetic vitamins either as food additives or food supplements has resulted in a practical solution to some major nutrition problems. After these considerable accomplishments nutritionists are now turning their attention to another aspect of malnutrition viz., protein deficiency.

Although knowledge of man's protein requirements is still incomplete, it seems clearly established that young adults need eight amino-acids to maintain nitrogen balance. One form of protein malnutrition is now commanding increasing medical and scientific attention. This disease bears the awkward but significant African name of Kwashiorkor (pronounced kwash-e-or'kor) which means "red boy." The hair of the victims of this disorder often turns red or pale.

Kwashiorkor occurs most commonly in children of tropical or subtropical climates, and is characterized by severe under-nutrition with subnormal weight and height, diarrhoea, abdominal distention, generalized oedema and depigmentation of the skin and hair. Death from the disease is common. There are no characteristic biochemical changes

except hypoalbuminaemia in the acute stages. The abnormalities are usually reversible by a diet high in protein, particularly concentrated milk-protein. However, this syndrome may occur as a result of malabsorption with hypoproteinaemia, following surgical procedures on the intestinal tract.

Presumably, if children everywhere had adequate amounts of either fresh or dried skimmed milk there would be no major protein malnutrition problem. However the problem is greatest where milk is unavailable from local sources and the continuing gift of surplus American milk to these areas is inadequate.

Since many plant proteins are also curative, it is advocated that people of various undeveloped countries be taught to produce and use the animal or plant protein to which their particular land is most adaptable. This desirable goal however, would involve socio-economic and educational attainments which could be quite difficult to accomplish. The people of unprogressive countries can offer strong resistance to enlightenment.

Although many of the mysteries of protein malnutritions may be solved by current scientific research, the practical application of knowledge in undeveloped land may present an even greater problem. —(*Editorial International Medical Digest*, July 1958).

THE FEAR OF DEATH

PHYSICAL man, silhouetted against the backdrop of the passing centuries, is largely a static figure. Paleo-anthropologists tell us that the bodies of our remote ancestors in structure and function almost exactly resemble our own. Social and sapient man however, is a very different creature than his Cro-Magnon ancestor. For he has learned to pit his brain rather than his brute strength against the opposing forces of nature and so has made his way from cave to penthouse.

In all this complex progression, no attribute more clearly differentiates present from past man than does his steadily increasing ability to control and manipulate his physical environment. This is his hallmark. Today, more than ever in his history, man is the undisputed master of his physical world. Indeed, his successes in the physical and biological sciences have been so many and so remarkable that we have come in consequence to accept as an almost certain and established thing that man, through science, is equal to the solution of any problem that may confront him. Success has become a habit of the species.

But there is a glaring exception to this paean of man's conquests, one problem where all his assurance, ingenuity, and wit avail him nothing; an area which stands in bold contrast to the rest of nature which is so malleable to his will. I refer, of course, to the phenomenon of death. Here man, with all his

C. W. WAHL, M.D.,
Los Angeles, California.

cleverness, is powerless. He may postpone death, he may assuage its physical pains, he may rationalize it away or deny its very existence, but escape it he cannot.

Yet, by its fearful and unwelcome nature, the inescapable fact of personal death impels a solution. And if it does not yield to science and to rationality as does the rest of the physical universe, then we are perforce impelled to employ the heavy artillery of defence namely, a recourse to magic and irrationality; and we employ these in this area on a greater scale and in a more massive fashion than in almost any other area of human experience.

The massive extent to which we employ magic in the handling of death is often underestimated by us without a deliberate reflection. Consider the lengths to which we go. Firstly, the word death is itself taboo, instead, cumbersome and elaborate euphemisms such as "passed on" or "departed" are employed. This, however, has been true at all times and in all cultures. The very word "perish" has its origin in the Latin "to pass through," i.e., a denial, even in those days, of life as terminative and finite. We maintain at immense expense an entire industry whose sole purpose is to shield us from the crasser realities of death's exis-

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tence by attempting to preserve and prettify the corpus, creating an illusion of momentary sleep. Moreover, the vast majority of us identify ourselves with religious and philosophical systems of belief which asseverate that death is not death at all, but is rather a fictive experience, a brief transition between one more important existence and another. Most of these purport to guarantee the existence of an immortal state, and propose to supply in return for credence and adherence to their system a means of avoidance of death and its supposed sequelæ. We flee from the reality of our eventual death with such purpose and persistence and we employ defences so patently magical and regressive that these would be ludicrously obvious to us if we should employ them to this degree in any other area of human conflict.

The fear of death, like the fear of sexuality, when deeply repressed is heavily and expensively symbolized. When we fear death intensely and unremittingly, we fear instead, often, some of the unconscious irrational symbolic equivalences of death. A steadily increasing body of clinical evidence shows us how manifold these may be. While the state of our knowledge is not such as to allow us to say what death is with absolute certainty, it is a great help to know what it is not. The child who is strongly dependent upon his significant adults for his security and his conception of himself as a worthy and adequate person is capable, if they meet these needs, of inte-

grating the concept of "not-being" if his parents can do so, and he is solaced by the thought that his demise (and theirs) is yet far away. Spinoza has said that "the adult who sees death as a completion of a pattern and who has spent his time, unfettered by fear, in living richly and productively, can integrate and accept the thought that his self will one day cease to be."

And in this resolve we have no better example than that given us by Sigmund Freud. Exploration of the phenomenon of death is not usually done by dying men. Its very propinquity to the old prevents them from forming the necessary detachment which makes scientific investigation possible. Freud is one of the few exceptions to this rule. This old man, who was to live for sixteen years with the daily reality of a malignant cancer, pointed out, while his own sons faced death on the battlefield, that it might be well for us to realize more fully the true nature of our attitudes towards death, an attitude which we are all too willing to distort and suppress. He said, "To deal frankly with the psychology of death has the merit of taking more into account the true state of affairs and in making life more endurable for us." This may be an austere and Spartan hope, but it is on just such a hope, rather than on the promises of the mystics, that the progress of mankind depends.—(Condensed by Mr. T. N. S. Raghavachari from the *Bulletin of the Menninger Clinic*, November 1958).

THE FAMILY DOCTOR IS AN ASSET

Those who have family doctors are indeed fortunate. They know they'll be well taken care of, day or night; a middle-of-the-night emergency call will bring a doctor in a hurry. But those who don't have family doctors and the many who have never been seriously ill and never needed a doctor can't be sure they'll be taken care of in an emergency. You must choose a doctor before illness strikes; he knows your medical history, how you react to certain drugs; your normal blood-pressure and what illnesses you have had.

Decide what kind of physician would best suit your family needs. A family doctor, usually a general practitioner can treat successfully about 85% of the illnesses your family is likely to have; some doctors practise alone; others team up with several other physicians in a group practice. Decide which type of medical service meets your requirements. When you've decided call the doctor and make an appointment to see him.

Have a frank talk with him ask him about fees, night calls, the hospitals he's associated with, and whatever else is in your mind.

Look him over. What's your first impression? Do you feel at ease with him? Are you satisfied with the interview? Did he answer your questions satisfactorily? Do you like him? Would you like him to treat you?

All most men want from their wives are affection, admiration, encouragement, and ability to live grandly on an inadequate income.—(*The William Feather Magazine*).

Changing physicians. Always remember, the choice of doctor is your own and it is important that you have confidence in his abilities. If at any time you are dissatisfied with your physician's services, talk to him about your nerves and see if the difficulties can be ironed out. ~~Should you decide to change your physician,~~ tell him so either by personal visit, phone or letter. Then he will turn over your medical records to the new physician of your choice.

Remember it's a true emergency if there is bleeding that won't stop; any interference with breathing; if there is a convulsive seizure; if there is acute pain; sudden unconsciousness without quick recovery; a high temperature with no apparent reason; or if there is severe coughing. When you call the doctor give him all the information about the patient—pain, bleeding, temperature, etc.

Don't risk your health and money by taking chances with quacks, frauds, charlatans, cultists and fake healers. Select your physician intelligently. Remember "No doctor is a miracle-man. He can't make a sick man well unless you co-operate with him. So choose your doctor carefully, have faith in his ability, follow his instructions and give him a fair chance to show that he can help you."—(*Today's Health*, December 1958).

PSYCHIATRY AND THE TREATMENT OF DELINQUENCY

[During the past decade, the approach to the treatment of criminals and delinquents has undergone a gradual change. In legal as well as in medical circles, increasing emphasis has been placed on the rehabilitation of the offender—on his restoration to society as a responsible, law-abiding citizen who will participate fully in the life of the community. The teachings of modern psychiatry have done much to shape this new outlook, and recent advances in psychiatric methods are being successfully applied in the treatment of delinquency. The article below is based on the report of a seminar held in May 1958 to discuss some of the latest trends.]

THE attitude to the treatment of criminals and delinquents adopted throughout the discussions of the WHO seminar held in May 1958 was based on modern principles of social defence.

The concept of social defence does not imply the abolition of punishment, nor that the judicial process should be dispensed with. In fact, it is considered essential that the individual should realize that he will have to account to justice for deeds that are prohibited by law. It was felt, however, that the procedure in courts of law should be carefully reviewed from the point of view of its psychological effect.

From the psychological point of view, the fullest possible development of the sense of responsibility is one of the principal aims in the treatment of all criminals.

From the medical point of view, the length of the sentence should depend upon the time required to complete the course of treatment, rather than upon the gravity of the offence. It was suggested that, where short sentences are imposed, a start

should be made with treatment and that means should be devised for continuing this after the prisoner's release.

The type of treatment which can be given will naturally depend upon the nature of the institution in which the offender is confined, the duration of his sentence, and the staff available.

The treatment of delinquents and criminals can take place either in penal institutions, in special institutions for abnormal offenders, in mental hospitals, or at liberty. Wherever possible, treatment 'at liberty,' with the offenders attending as out-patients at psychiatric clinics, is the method of choice. Treatment 'at liberty' offers the advantage that the offender is not cut off from the outside world; his rehabilitation and integration into society are thus greatly facilitated. At the same time, this method provides opportunities for investigating the offender's home background and carrying out active social case-work with his family with a view to eliminating unfavourable factors in his environment.

Many of the difficulties inherent in treatment in prisons and other institutions can be overcome by practising intensive group-therapy along psychoanalytical lines. Group-therapy provides a small community in which the patient's adjustment can be tested out in real situations. On the other hand, unless it can be extended to all the members of the institution, it does not wholly overcome the tensions created by singling out certain members for special treatment. This line of reasoning leads to the conclusion that it would be preferable to establish special institutions for treatment by such methods. It was recommended that institutions devoted specifically to the psychiatric treatment of criminals should be small and well-staffed.

The van der Hoeven Clinic in Holland has accommodation for about 100 delinquents and no patient is admitted under the age of 18. Individual and group psychotherapy are given, but otherwise the patients are encouraged to lead as normal a life as possible and are given a large measure of responsibility.

The Herstedvester Institution in Denmark has adopted an approach that has been termed "dynamic-growth-therapy," because it is aimed at starting a process of growth or development that will enable the patient to overcome his need for dependence. The method is based on

both group and individual psychotherapy.

The primary concern of the prison medical officer is the ultimate rehabilitation of the prisoner, and he will therefore, need to work in close collaboration both with the prison administration and with those who are more directly concerned with after-care. The post-graduate training of every psychiatrist should include experience in handling and treating delinquents. Stress is laid on the need to develop forensic psychiatry as an independent speciality.

Psychiatrists have an important contribution to make to the treatment of criminals and delinquents. As in other fields of mental health, many criminal deviations from "normal" behaviour appear to be due to a maldevelopment or breakdown of inter-personal relations. The courts should therefore have expert advice on the personality of the delinquent in order to enable them to decide on the most appropriate "treatment," whether punitive, medical, social, or re-educative, or any combination of these. In order to arrive at his conclusions, the psychiatrist must have access to all the information available, but he should be protected from the necessity of revealing confidential information to the courts.—(Condensed by Sri T.N.S. Raghavachari from the *Chronicle of the WHO*, October 1958).

Worry is a killer, and it kills all the more quickly when it is allied to a badly-functioning body. It is the unfit man who worries the most and always over trifles.—(F. A. Hornibrook).

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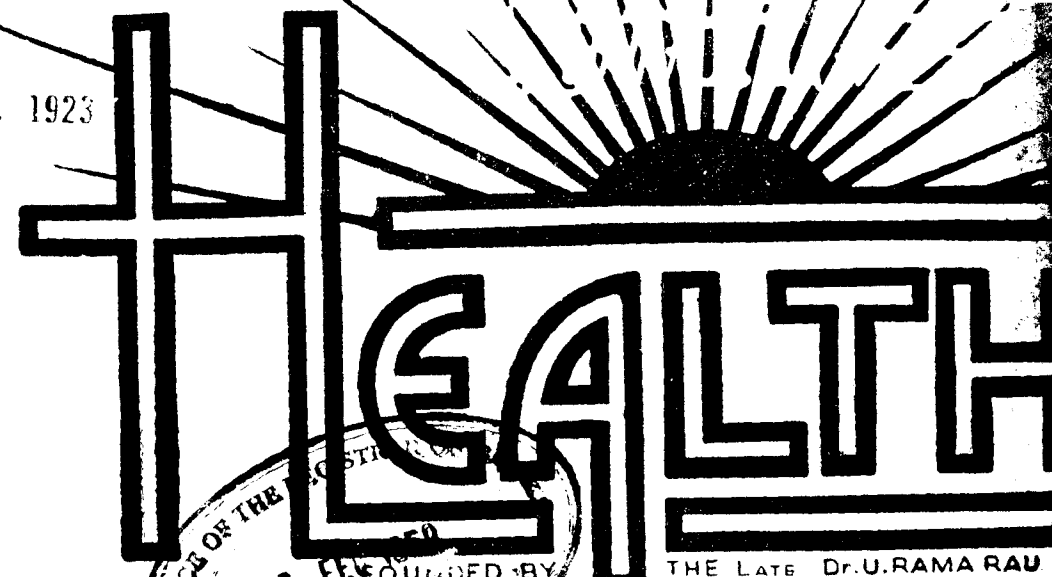
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What's New in the News?

Display Giant Model of Human Cell

A giant plastic model of a human cell, 24 feet in diameter and 12 feet high, was unveiled by the Union Carbide at a recent meeting of the American Medical Association. The cell is more than a million times as large as an actual red blood cell in the human body. Accommodating 40 viewers in its interior, it provides the first "inside view" that men have ever had of the cell.

The model includes the most recent discoveries about cell organization and chemistry. It is used to show laymen and scientists the modern concepts of cell structure.

Almost a mile of special plastic tubing, a mile of electric wiring, and a large variety of custom-made plastic structures were used during the year of planning and construction work on the model.

Develop Plastic Heart

An artificial "heart" has been developed by Drs. Willem J. Kolff and Tetsuzo Akutsu of the Cleveland Clinic.

The doctors replaced a dog's heart with a plastic "heart" which kept the animal alive for two hours and 20 minutes. This is the first time in medical history that life has been maintained by an artificial heart within the body.

Doctor Kolff says, "We have shown that replacement of the heart is possible. If it can be made safe, it is not different from replacement of any organ, and we do not see any strong reason why it should be less practical. However, it will be many years before a human heart can be replaced."

Doctor Kolff added, "It will also be years before we have a plastic device sufficient to withstand the labour that human hearts and valves must perform, or a motor small enough and with high enough capacity to be carried within the human body."

The heart, the size of a man's fist, was developed by the doctors and a team of engineers. Doctor Kolff, a native of Holland, has also developed artificial heart-lung machines. — (*Today's Health*, September 1958).

Dinner by Conveyor Belt Saves Time

At a new restaurant opened recently at Sydney, Australia, the diner orders a meal by pressing buttons on a panel corresponding with the dishes on the menu.

This registers the order and the table number in the kitchen and notifies the cashier of the amount of the bill. Then the food is brought from the kitchen on a conveyor belt.

The designer of the system says it will deliver food in from three to five minutes during a busy period, instead of the present average of ten to fifteen minutes.

X-ray Machine within the Doctor's Bag

An X-ray machine, small enough to be carried in a doctor's "little black bag" has been developed at the Armour Research Foundation in Chicago. The base machine itself is no bigger than a match stick and is powered by the radio isotope Strontium 90. Even with the picture intensifier and the protective casing, it will still fit into a brief case and is expected to be available in the market within the next two years. — (*What's New in Science*).

Keep Cool with Gold

Recent patent applications by an American aviation firm cover a new method of keeping engine-shrouds cool. The shrouds are coated with gold which protect the inside from heat and corrosion and stops too rapid heat transference from the inside to other parts of the aircraft. The gold applied is in thicknesses varying from one millionth to 25 millionths of an inch. — (*World Digest*, December 1958).

Unseen Dictator in the Office

A new system which keeps the typist away from the boss has been demonstrated in London recently. It is a centralized dictating system whereby letters are dictated into telephones and recorded on tape machines situated in the typing pool.

The user of the system picks up his phone and moves a selector switch until a red light indicates that he is in touch with a free machine. If all machines are being used the light will be on before he picks up the phone.

He has push buttons on his desk to control the dictating machine, and an index strip on the machine is punched every time he makes a correction or comes to the end of a letter. Thus the typist can see the length of the letters and where corrections fall. She then collects the tape and types the letters, without ever seeing their author.

Ashtangasareeram

By

P. S. VARIER.

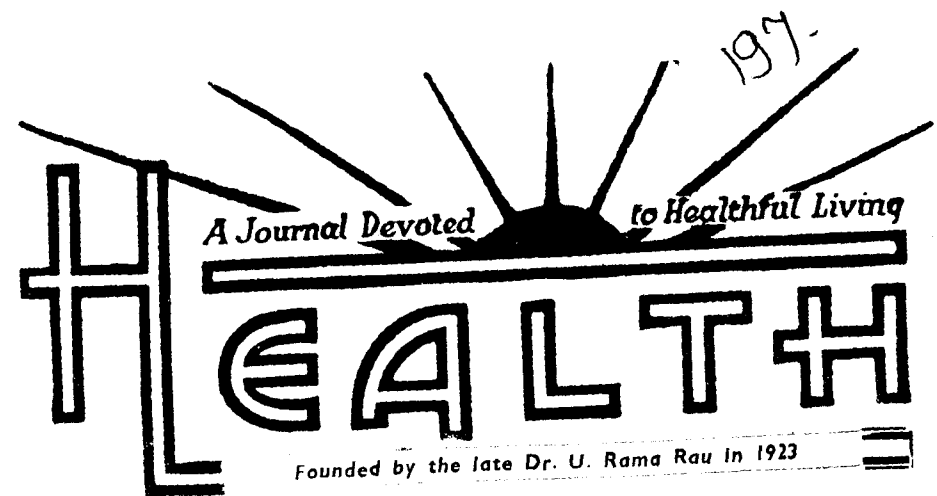
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ANOTHER YEAR HAS GONE BY

THE old year has passed and a new one has dawned. New and interesting discoveries have been made in the field of nuclear physics, new intercontinental missiles have been developed; and satellites are circling the world above the stratosphere and round the sun. The cold war has not shown any signs of abatement or remission; but no major conflicts between nations have been evident, though there have been minor upheavals. Many nations continue to be still too near the borders of poverty and want, and keep struggling along. The financial and other help that have been given to the underdeveloped countries under the W.H.O., UNICEF, Colombo and other plans have enabled some progress to be made in improving their condition.

Everybody talks of peace but the politicians of the world pile up means of destruction and seem inclined to plunge the world into disaster, all of course on the highest principles of self-defence. "Man's lack of good will is the most terrible problem in human history." Peace-lovers are not however wanting, who are trying their best to divert the attention of mankind from thoughts and processes of self-destruction and to direct it on the paths of peace and progress. This has been outstandingly evident in all that our beloved Prime Minister has been doing to counter the menace.

We offer our sincere good wishes to all our readers and contributors for a happy New Year and earnestly request their wholehearted co-operation and good will in the New Year.

SHRI S.R. DAS, the Chief Justice of India, who presided over the All-India Brahmo Conference at Patna in October 1958, attributed the "abnormal and irreligious behaviour of present day children to faulty education." Education with a spiritual orientation is a vital necessity and religious instruction in schools and homes should commence early in life; such education in the past had behind it all the makings for healthy living and the avoidance of all base thoughts and wicked practices that spelt evil and loss of health.

Because of the diversity of religions in our country (all of which however, embody in their tenets, the principles of plain living, high thinking and upright conduct leading to the preservation of health in all its glory) the Indian Constitution had to lay down in Article 28 that religious instruction cannot be imparted in Government institutions. Article 19 says that without the specific permission of the parents and guardians no religious instruction can be imparted to students in State-aided educational institutions. The result has been, according to India's Chief Justice, that there is "neither a beautiful (natural) environment for our schools nor have they a spiritual atmosphere." In the present set-up, "home is therefore, the only place where a spiritual atmosphere can be created and maintained by

means of family prayers properly and regularly conducted and insisted upon." Unfortunately as a result of the prolonged impact of the materialistic western civilization on India's youth, and the withdrawal of religious instruction from schools during the last 12 years and particularly also of the baneful unhealthy influence which most cinema films exert on the plastic minds of our young children and adolescents, reverence for God and disciplined life in the home, born of respect to elders are now rapidly becoming things of the past. Shri Dr. SARVEPALLI RADHAKRISHNAN while inaugurating the Children's Film Festival at Madras in October last said that films for children should be of a separate kind altogether, from those for adults. "They must not be intrusive and should not obtrude or impinge and should not be didactic. They should convey information and provide enlightenment."

Ethical and moral values are unfortunately depreciating fast; godlessness and defiance of healthy traditions and customs in the house are fast gaining ground. It is the duty of every patriotic adult citizen therefore, to resist this unfortunate tendency and bring about the much desired reform of a well-disciplined youth who will uphold and maintain the glorious traditions of our land.

Facts to Know About Diabetes

HISTORICAL.—Two thousand years ago the physicians of Ancient Greece knew about the disease, which they described as a "melting of the flesh into water (urine), adding their opinion that this meant that "the end of life is near." Nowadays, although we know that severe diabetes is fatal if untreated, the result of careful observation and research in the last 70 years is that diabetics *can* be treated, and that well-treated diabetics can earn their living and enjoy themselves like other people.

Symptoms of diabetes.—In the early stages of the illness, except in acute cases, the patient may not notice anything wrong, and the disease can only be discovered if you test the blood or urine for sugar. Later, the sufferer may complain of weakness and loss of weight and excessive production of urine, with a large appetite and great thirst, and frequent urination.

What is diabetes? How do we know what is wrong?—Von Mering and Minkowski in 1889 removed the pancreas, from dogs, and showed that these had symptoms similar to those in human diabetics. The dogs became very thirsty and thin, and had sugar in their urine and died from diabetic coma.

Work since then has shown that normal humans and animals obtain sugar from their carbohydrate food, which is stored in the body and then used up as it is needed. But the diabetic who receives no treatment can

neither store the sugar nor use it up properly. So more sugar is present in the blood than there should be, and some of this surplus may be lost in the urine.

Insulin in pancreas prevents diabetes. Until 1921 people had been trying to extract from the pancreas of animals and fishes something which could be used to treat human diabetes. But in 1921 Banting and Best succeeded in getting extracts which could be used on diabetic dogs, and which were later shown to be effective in human diabetes. The substance is known as *insulin*, and methods for its extraction rapidly became available, so that it could be used for saving human lives. Further work on animals showed that the pituitary and adrenal glands also produce substances which regulate the use of sugar by the body. Changes in any of the three glands may cause the onset of diabetes in human patients.

How is insulin obtained and standardized?—Special methods have been devised so that it can be extracted from the pancreas of animals, and nowadays we use the pancreas from those slaughtered for human food. The strength of the extracts has still to be measured, and they have to be standardized by their effects on animals such as rabbits before it is safe to use them on human diabetics.

That is the case at present, but great strides have been made in discovering its chemical formula, which has to be the

investigated by a competent and experienced doctor.

Routine laboratory data for the female include complete blood count, hemoglobin, blood group and Rh, serology and an urine analysis.

It is important to emphasize that all abnormalities, no matter how seemingly trivial, should be corrected. Sometimes the removal of what appears to be an innocuous cervical polyp will lead to a pregnancy.

Vaginal factors contributing to sterility include congenital abnormalities, infections, pH changes and growth. Of primary interest here are the vaginal infections which should be corrected when found. Treatment for these conditions is varied but is usually successful. As we all know however, frequent treatments, especially to eliminate the *Trichomonas* and *Monilia* group, are often necessary to effect a cure.

The role which the cervix plays in sterility is an important one. In fact, some investigators believe cervical pathology is the prime factor in over-all studies. In examining the cervix, we should look for congenital malformations, abnormalities of cervical secretions and pH, infections, growth and anatomical deformities. The importance of a hostile cervical secretion has often been overlooked in the study of fertility problems. For conception to take place, not only fertilizable ova and potent spermatozoa are needed, but also conditions in the genital tract must be such that the spermatozoa may pass through

the cervical mucus and reach the ovum. The cervical mucus undergoes cyclic changes which makes it particularly receptive to spermatozoa during the three or four days of the ovulatory phase. At this time it is thin and translucent, thus easily penetrated by sperm, while at other times during the cycle the mucus is thick and scanty and presents an almost impenetrable plug.

The uterus.—In evaluating the uterine factor in infertility, we should think of congenital defects, malpositions, inflammations, tumours, hyperplasia and endometriosis.

Following a thorough physical examination, with particular reference to local genital pathology, Fallopian tube patency should next be established. Coincident with this, an examination of the husband's semen is indicated. According to MacLeod, semen is poor when the volume in each ejaculate is below 2 cc., the sperm count is below 20 million active cells/cc., and less than 40-per cent motility exists. Others place 60 million/cc., sperm count as the lower limit of normal. All authorities are in agreement that motility is the prime factor in male fertility. The maintenance of good nutrition and sound general health is important.

Determination of the *Fallopian tube status*, as regards potency, is a most important part of every fertility investigation. The two methods of

study commonly utilized are utero-tubal insufflation with gas and hystero-salpingography with the use of radio-opaque media. Either method may be employed, but the more inexpensive insufflation with CO₂ gas is usually carried out first. Rubin and others have utilized repeated tubal insufflations as a therapeutic measure to relieve sterility due to various degrees of tubal obstruction. Rubin reports 20 per cent success with this method.

When it becomes evident that the Fallopian tubes are not patent after multiple insufflations and after at least one hystero-graphy, plastic surgery may be contemplated.

Determination of ovulation.—Finally, in our study of the

infertile female, we come to the most complex aspect, namely the pathology of endocrine sterility. In order to determine whether ovulation has taken place, three procedures may be employed—a basal temperature chart, endometrial biopsy and urinary pregnanediol determination. These being highly technical expert procedures, should be done only by a competent doctor.

The above outline gives the basic studies indicated in the investigation of an infertile couple. The prognosis in an unselected series seems almost directly proportioned to the perseverance of the physician and the optimism of the couple involved.—(Condensed by T.N.S.R. from *St. Luke's Hosp. Bull.*, Nov. 1957).

Air Travel for the Sick

FLYING is not harmful to the majority of sick people, says Dr. Sidney Kreinin. Two major considerations should be taken into account, *viz.*,

(1) Will the high altitude do harm to the patient? (2) Will it be better for the patient to travel by other means of transport?

Air travel is inadvisable in severe anæmia, lung or chest difficulties, and serious heart trouble. Persons with active peptic ulcers are warned against flying, for as one ascends, gas in the intestinal tract expands. Such lesions as peptic ulcers may perforate under the stress of

rapidly expanding gas.

Patients with mild asthma may safely fly. However a patient who is subject to frequent attacks should not fly, especially not during an acute attack.

Flying is out of the question for persons with acute upper respiratory infections, sinusitis, or stricture of the eustachian tube. Persons with mental diseases are more subject to air sickness than other patients. In addition, when they have disorders that make them dangerous to themselves and other passengers, they should not be allowed to travel by air.—(G.P.).

IS YOUR CHILD ILL?

(Check these before you call a doctor)

WHEN sick children are too young to tell what hurts, or how they feel, it's hard to know how sick they really are. The doctor you call will ask a lot of questions if he is unable to come immediately. How can you know what to tell him? How can you get the information he wants? Dr. Donald A. Dukelow, Bureau of Health Education, American Medical Association, says, "A little effort in gathering the facts before you call the doctor will help him to know just how sick the youngster is and how critical the emergency may be."

Take his temperature:—Feeling a child's skin is an unreliable way of determining temperature. Take his temperature with a fever thermometer. Buy a rectal thermometer. Wash it with soap and cool water and shake it so the end of the mercury is down near the bulb. Lubricate it with a little oil, mild soap, or cold cream. Lay the baby on his back, and while holding his feet up, gently insert the thermometer for an inch or so into the anus. Hold the buttocks together for two minutes, remove the thermometer, and write down the temperature reading.

When the temperature is taken orally:—The thermometer should be held in the mouth a full two minutes.

Be sure to tell your doctor how

you took the temperature reading. It makes a difference whether it was by rectum or by mouth.

Observe skin appearance:—With some illnesses the skin is flushed, red, even bluish. With others it is pale or grayish. Some diseases bring a rash. Note whether the rash is separate spots like small mosquito bites, or more like a mottled, marble pattern of red on white. Is the rash raised above the normal skin, or is it flat?

Listen to breathing:—While the youngster is lying undisturbed, count the number of breaths he takes in a measured minute. If his breathing is very shallow you may have to hold your hand gently on his chest to be sure your count is right. Write down your count. Note whether the effort to breathe makes wheezing or croupy coughs. Has the youngster coughed or sneezed? Does his nose run more than usual?

Is the child active?:—Is the youngster restless or quiet? If restless, are his movements jerky, wild and purposeless, or does he seem afraid of something and trying to get away? If quiet, is he unconscious, doxy, and slow to respond, or just tired? You know these things, but it's hard to explain them to the doctor unless you really "see what you look at" while observing your child's symptoms.

Check digestive upsets:—Note the character of bowel movements. Compared to what you have learned to recognize as normal, are they more or less

frequent, more formed and hard, or more loose and watery? Are they the same colour? If different, are they lighter or darker? Is the odour different? All these may be important. What about the cramps like colic pains that come and go and that cause him to pull up his knees and scream? Has he vomited? If so, was it thrown out under pressure or did the youngster seem to "spill over"? How many times? What did it

look like?

Report by telephone:—When you know these things you are ready to call your doctor. What you report to him can help him know whether he's dealing with a serious emergency. He'll know if he can safely wait to see your child during his home calls, or whether you can bring the child to his clinic where he has facilities for a thorough examination.—(*Today's Health*, September, 1958).

More Light on Homework

ROGER SMITHELLS

(Home-Service Adviser, Br. Med. Assoc., London)

GRANDMOTHER always said to me, "Never read in bed. It is bad for the eyes." She often made flat pronouncements of this kind which went unquestioned. None of my grandmother's bedrooms had adequate bedside lighting, so in a sense she was right. But it is not bad for the eyes to read in bed unless you read in a bad light; though it was years before I was able to read in bed with a clear conscience, even in a good light.

Today there are still homes where lighting arrangements are so poor that you read at your peril, in bed or out. The eye is a very obliging organ. It will happily adapt itself to adverse conditions for a long time without complaining. But reading, writing or doing any fine work in a poor light is placing an unfair strain on your eyes whether you are aware of it or not.

Good lighting contributes to

the health and safety of every member of the family, but it is of special importance to school-age children, who may have to do long hours of homework by artificial light.

Where do the children do their homework? The dining-room table may be a popular spot. But a central ceiling fitting which throws an adequate light on the family meal may not be at all adequate for reading about the Wars of the Roses or drawing a map of Patagonia! Working under a ceiling light often means working in your own shadow as you lean forward over the table. If you are reading a book printed on glossy paper, the overhead light may be reflected off its surface, causing dazzle and eye-strain.

These troubles will be reduced if the ceiling fitting is of the type which can be pulled down towards the table for close work

and pushed up again when a general light is needed. Page dazzle can be lessened by sitting to one side of the light instead of immediately underneath it. But for close work, a table lamp or a floor standard which can be brought near to the table will provide a better and more adaptable light for the job. Ideally, there should be a separate light fitting for each child, placed so that the light is thrown on the work from the left side.

In the family living-room, homework, reading, sewing and hobbies may all be going on at the same time in different parts of the room. Here it is even more important to a variety of light sources—preferably one for each person. Given a sufficient number of local light points, a central ceiling pendant is superfluous. But in many homes, this central pendant is the sole source of light, simply because it was the only light point provided by the niggardly house-owner who put up the house in the first place.

For the older child, a bedroom-study can provide a blessed refuge from the family hurly-burly. For those who are harassed by approaching examinations, a degree of peace and seclusion may well tip the balance between success and failure. Here again, a good desk-lamp for the work-table, a standard-lamp or desk-lamp for arm-chair reading and an efficient bed-head light are really necessary.

All this adds up to the fact that a lighting scheme must be extremely flexible to meet the needs of an average, hard-work-

ing family. Since most homes are inadequately wired, this flexibility is often difficult to achieve. It is all very fine to recommend a light for each person in the family living-room, but how do you organize this when the wiring in the room provides one ceiling light and one wall-socket?

The only wholly satisfactory answer is to have extra wall sockets installed. The cost of adding sockets in the ground-floor rooms of a house with old-fashioned wiring may be somewhere between three and five pounds per point at present rates.

If the family budget will not stretch to these wiring improvements, you can fall back on the expedient of two and three-way adapters from existing light points. This will enable you to run several fittings from a single outlet. The drawbacks of this device are the risks of overloading the existing system and the danger of trailing flexes.

The risks of overloading are not serious. Your electrician can tell you the maximum number of 60 or 100 watt lamps which you can safely run from one point.

Deal with the danger of trailing flexes by leading the flex round the room to the point where the light will be used and stapling it lightly with insulated staples to the top of the skirting board or picture rail. If you are fixing new wall lamps, you can lead the flex up from the skirting or down from the picture rail, making a decorative feature of it by fixing the flex so that it

forms a pattern on the wall. Run flex in a single length from the socket to the light point and *avoid make-shift joints bound with insulating tape*. If a flex becomes frayed and worn, *renew it completely and immediately*.

When choosing fittings for use with your extra points, remember that a good fitting should let out the light, not bottle it up. Table standards for children's homework and other close-work should throw their light on to the working surface but screen the lamp from the eyes of the worker. Choose, if possible, a table lamp with a flexible or adjustable arm which allows the light to be directed exactly where it is needed. Studio lamps of this type are now fairly cheap.

If you use opaque shades which throw all their light on to the work in hand, have some

kind of general background lighting, too. Otherwise the contrast between the brilliant pools of light and the surrounding darkness may give an effect of glare and dazzle, like the headlights of a car on a dark night.

Finally, you cannot have too much light. Even if you cannot install new light points or new fittings, you may be able to improve your present lighting arrangements by using larger lamps in the fittings you already have. This can be specially important in halls and landings. Badly-lit stair-cases are one of the commonest causes of home accidents. Once you have stepped up your lighting with larger lamps, you will never want to go back to the old, dim days. More light is the best tonic you can give your home.—(*Family Doctor*, September 1958).

Doctor's Hobbies

Doctors are probably the busiest people, yet they indulge in a surprising number of hobbies in spare time judging by an exhibition of their handiwork held recently at the British Medical Association House in London. Reporting on it, Richard Gordon, said that the 735 exhibits certainly showed how doctors differed. "They range from a home-made Geiger counter to home-made vinegar." "One doctor has made a highly secret and apparently highly illegal device for tapping your neighbour's telephone! Another has made an imitation Egyptian mummy. There is a new mountain rescue stretcher, and a new operetta. There were also a pair of chinchillas and a pair of tigers."

"After spending all day looking down people's throats, most doctors prefer an outdoor recreation. One wanted to enter his herd of Friesian cows. The next most popular outlet is painting. I'd expected the hundred or so pictures to be mostly clinical studies, but found instead nestful scenes of landscapes in the sunset. Perhaps they were all painted under the influence of tranquilizers. Neither were there any nudes, which proves that if you spend all day looking at people with their clothes off, enough is enough!"

Embroidery was a popular hobby, as might be expected in a profession which got extensive daily practice in needlework, and one doctor showed his seven methods for darning socks. Woodwork was a favourite, for making drug cabinets two doctors had made violins and another an electronic organ. There were model railway engines and boats, a puppet theatre, and a tempting selection of home-made wine—and what could be better for a medical dinner than a bottle of "old Chateau Harley Street?"

TIME FREE, CARE FREE

THEODORA ALCOCK

(Tavistock Institute of Human Relations, London)

WHO is a slave to the clock? Not young Griselda, happily blowing away at her private time-piece, a dandelion clock, and quite untroubled by any sense of urgency. The morning crowd hurrying to catch the 8-15, the businessman or doctor with an eye on the next appointment, may well envy her. Some of us, expressing our anxieties in "so little time, so much to do," may even learn from her. To understand Griselda or any other young child, we need to study the way in which time-sense comes about, and how it is developed.

Measurement of time by the calendar, watches, and clocks, although necessary is an artificial affair. We all know from experience that time is relative to our feelings. If we are bored, or impatiently awaiting an event, we tend to exaggerate any period. As the Governor of North Carolina said to the Governor of South Carolina, "It's a mighty long time between drinks." If we are happily engaged, time flies.

In the beginning a baby, like grown-ups, is an egotist about time, only much more so. He is concerned entirely with satisfaction of need, his sense of time being relative only to need-fulfilment. If this is unduly prolonged it will be a mighty long time between drinks for him too, as between all the other satisfactions of infancy. *His clock is inside him, very close to his small stomach.*

Very slowly this sense of time is extended to the external world, as part of a developing system of relationships with objects and people around.

Experience of space begins through simple co-ordination of body movements related to each other; to parts of the mother, such as the breasts and enfolding arms, to objects in cot and bath, to the clothes touched. A rudimentary experience of time comes through the duration of such activities. As early as four to eight weeks old, a baby reacts to happenings outside his own body. He will turn his head on hearing a sound.

At nine months he will, if interested, look for an object hidden under the blanket by his hand. At about a year old, he shows signs of recognizing some order of events such as Mummy coming, or Mummy going. This has become a time-sequence for him, though he has no concept of time as such. As his memory develops he may watch the place where Daddy usually appears, but his expectation does not extend to any special time. Later it will do so, but only as part of a series of happenings affecting himself:—Front door banging, feet on the stairs, Daddy's voice, Daddy picking me up.

Between two and five the understanding of time words such as before, after, soon, tomorrow, next week, increases steadily if slowly. But the meaning

of these words is usually very different for grown-ups and small children. The latter have no abstract notion of time, only of how it affects them. A two-year-old separated from Mummy will feel that she has gone for ever, and for the time will mourn as an adult will mourn for the dead. Even at four or five, such a separation may seem interminable.

Promises for the future can be understood if related to near events but not to those far off. "Mummy coming back after tea today" may reassure a three-year-old, but "tomorrow" will seem threateningly remote unless defined in terms of happenings in the time between now and then.

Only a few children of five can grasp the idea of next week. Most, if promised something a week later, will expect this next day, and be bitterly disappointed as well as indignant at the delay, honestly believing that a promise has been broken. As a result, a surprising amount of misunderstandings between parents and children occur through the child's difficulty, first in grasping the adult meaning of time-words, and secondly in accepting the value which is placed, at least in Western civilization, upon time as such. A young child lives in the here-and-now, which is not to be willingly exchanged except for an immediate attractive future.

So it's no use saying "Hurry up. It's late!" to our busy small Griselda, expecting her to move off smartly at the word of command. Give her the idea of

something ahead worth while to her, looking out of the car window, or the train, or meal-time; something which to her young mind provides a sensible, and understandable reason for abandoning a satisfactory job. This is diplomacy, not spoiling. It induces an attitude of optimistic expectancy towards the next step in life, which is no bad thing at any age.

Dawdling, so often infuriating to busy parents, is seldom a deliberate challenge on the part of a child. School programmes make for necessarily enforced timekeeping early in life, and children usually conform and gain by this routine. But, out of school, the best of them need, all the more, some time in which to be leisurely. To savour the present as they did when they were small.

Of course the family time-table must not be disrupted by the dawdler, but leniency can be a good policy, especially in the junior-school years. During this period, seven to eleven, though children learn to tell the time accurately, their sense of its value is often shadowy, and as a rule highly personal. So planning far ahead is not to be expected.

By the way, to estimate a given period of time without a watch or other external aid is remarkably difficult. Try it for yourself. Shut your eyes after noting the time on a watch with a second hand. Say you will open them when you think that exactly three minutes have passed. Check this against the

actual time. You will probably be out in your reckoning by at least one-third or more. So it isn't fair to tell your young son to come in after fifteen minutes' play-time unless he has got a watch or clock that he can judge the time by.

To be dependable about time is, like the ability for long-term planning, a sign of maturity. It is also a social virtue, making for good co-operation with others. Perhaps less obviously, our regard for time is closely related to our acceptance of mortality. This can be observed most easily among old people. Those who dread the end of life find the years rush by. For those

weary of living, time goes all too slowly. The philosophical, accepting without distress the inevitability of death, are able leisurely and contentedly to enjoy the pleasure of the here-and-now, as they did long ago when they were very young.

In the middle years of life, with increasing responsibilities, family anxieties and pressure of work, it is only too easy to get fussed and timeworn. "If only there were forty-eight hours in the day!"

It may be some comfort then to reflect that we all of us have all the time there is.—(*Family Doctor*, September 1958).

World Population Increasing by 5,500 an Hour

ACCORDING to the Demographic Yearbook for 1957 published by the United Nations, world population is increasing by 5,500 an hour, 47 million a year and will double its present estimate of 2,737 million before the end of this century. Population has increased almost by a quarter in the last 20 years. The estimated birth rate is now 34 per 100 inhabitants against a death rate of 18.

The Dutch live longest (71 years for men and 74 for women) and the people of India die soonest (life expectancy for both men and women is 32 years). Latin America is the world's fastest-growing area, though numerically Asia leads, adding 24 million annually.

The Yearbook reaffirms that women live longer than men in

every country for which statistics were available. The reasons for this has not been isolated but there were possible biological causes and "certainly the conquest of maternal mortality has aided the female in achieving the favourable position she now occupies." Accidents were a leading cause of death among males of most ages up to 44.

Infant mortality had reached "phenomenally low" levels in many countries, but Burma, Brazil, India and parts of Africa still showed high rates. Sweden had the lowest infant mortality (71 per 1000 live births) in 1956 with Iceland, the Channel Islands and the Netherlands close behind.—(*Journal of the Bengal TB Association*, August-September 1958).

Your Mind and Body

Why Stir Up Sex?

"By film, by television, by pictures in the Press, we stir sexual emotions which are already astir in the normal healthy being. Do you wonder, then, that some men, unable to resist the effects of the glamorous presentations of sex which are continually thrust before them, go berserk and that all sorts of tragedies result?"

Thus writes Sydney Moseley in *For Editors Only*. His strong words were provoked by a news paper picture of scantily-dressed dancing girls appearing before "isolated young men" in a show at a Borstal institution. "The idea was, it seemed, to appeal to their aesthetic senses; but what if it stirred other emotions? When you tempt men with drink or doxies the result is inevitable. But if, in a case like Borstal, there is only frustration, isn't it d—silly to put on this sort of entertainment?"

Where the Doctor Went Wrong

What do you expect of your doctor? Always cheerful, never tired, unfailingly interested in your problems, always right in diagnosis, always correct in treatment?

It's too much to expect of anybody; he's only human, and he sometimes errs through that very fact. This is frankly revealed in the *British Medical Journal* by Dr. C.P.E. Elliott-Binns, who holds degrees in Moral Sciences and Medicine.

He tells how detection of lung

cancer was missed in a patient who for years had complained of various pains. This man was, in fact, a long-established hypochondriac, and called in his doctor so often that the onset of his condition went unnoticed. Tiredness and overwork also caused the doctor to miss an advanced pregnancy. A momentary irritation at being stopped as he was hurrying away to another case led to a cursory examination and treatment for a "sore lip" which later became more serious and ulcerated.

Then there was the case of a girl living in the doctor's household who developed a slight limp: she said she had strained her groin, and as she had had some treatment from her own doctor the matter was forgotten. Later, it developed a condition that proved to be fatal. The tragedy could not have been averted, but diagnosis could have been made earlier.

"The doctor may be in a frame of mind where his judgement is clouded owing to fatigue, boredom, ill-health, worry, or because he is in too much of a hurry; or he may be irritated by the patient or the circumstances of his visit. He may see a patient so often that the visit becomes social rather than medical. It is well-known that if a doctor treats persons he knows very well—for example, a member of his family—he often treats them badly."

Of the ten cases quoted, the human factor played a major

part in delaying diagnosis in five of them; and it is clear that before the doctor begins to sum you up in his consulting-room, he "must first of all know himself and know his weaknesses." (*World Digest*, Nov. 1958).

Rules to Remember About the Common Cold

JUST because the common cold is common we tend to look on it as an unimportant ailment, hardly worth bothering about. Yet complications which so often follow can be very serious. Bronchitis and sinusitis are the commonest complications. Otitis media, an infection of the middle ear, is less common but more dangerous, and so, of course, is pneumonia.

There are three good rules for keeping clear of colds in winter. They all involve no more than a little care and common sense.

Avoid getting overtired:—That counts number one in the programme of prevention. Fatigue lowers the body's resistance to infection and is probably one of the most important factors in making anybody liable to catch a cold. Get plenty of sleep, and warm the bedroom for half an hour with the electric or gas fire before you go up and get undressed.

Keep away from infection:—That's the second rule. It means avoiding as much as possible crowded places, such as cinemas, shops, restaurants, trains, trams, and buses. You should also try to avoid the company of anyone you know has got a cold, though this isn't always easy and does call for the maximum of tact.

Remember, it is impossible for you to get a cold unless you have been exposed to the infection. People living in isolated communities are free from colds except when visited by travellers from outside who bring the infection with them.

Keep warm:—This is the third rule, and especially when out of doors. The importance of cold itself in causing a cold is probably exaggerated. But it does seem to act in the same way as fatigue by lowering the body's resistance. Cold air is not harmful to a body well protected by warm clothing. It does no good at all to a cold and shivery body too skimpily clad.

It is harmful, on the other hand, to have too many clothes. Some mothers smother their children in layer upon layer of thick jerseys and woollen underwear, hoping thus to keep the dreaded colds at bay. Often it has the reverse effect. For what happens? The child gets overheated and sweats. Then the sweat cools and he feels thoroughly chilled. So don't make that mistake either.

Regular exercise in the fresh air:—That is most important, especially when it is sunny. There is no doubt that those who keep themselves fit by regular exercise are far less likely to pick up colds.

Good eating:—A good mixed diet with plenty of fresh fruit and vegetables will supply all the vitamins you need. Good meals, well chosen and well cooked, will do more to keep up your resistance than any quantity of pills or portions. And always start the day well with a good breakfast.—(Claud C. Med. Watson, M.B., Ch.B., in *Family Doctor*).

REPUBLICAN CHINA DOES NOT FAVOUR BIRTH CONTROL

THAT the course of family planning in Republican China would run smooth would be to expect too much having regard to the complexity of the issues involved, and facts have reached us indicating some reversal of policy there.

Before the eighth congress of the Chinese Communist party, which met from May 5th to 21st last, a declaration was made to the effect that when the country was fully developed it would be able to sustain another 600 million inhabitants.

Because of what is described as his "wrong bourgeois theory" that China's birthrate should be limited, the Rector of Peking University was dismissed.

At the party congress, Liu Shao-chi, the political theorist, so far from advocating limitation of population, declared: "We have a population of more than 600 million and our party has ties of flesh and blood with this vast population. By relying on this great force we can, or soon can, do anything within the

realms of human possibility."

Writing in *The Scotsman* of September 18th, 1958, the Special Correspondent, Mr. Dennis Bloodworth, confirms that the birth control campaign in China has lost its initial impetus and is being quietly slowed down.

Dazzled by the prospects of a great economic leap forward and the ambitious targets of the second five year plan the Chinese "are demanding the children that will become tomorrow's workers."

According to a report in the *Vancouver Sun*, Canada, August 14th, 1958, Radio Peiping predicted that China's population would be 800 million in ten or fifteen years and claimed this to be "a good thing."

Mr. Bloodworth describes the Chinese programme as "almost terrifying in its audacity. Its success could soon make China the greatest Power the world has ever seen. Its failure could produce an economic crash audible on Mars."—(*News of Population and Birth Control*, I.P.P.F., No. 69, November 1958).

"I do the very best I can, and I mean to keep on doing it until the end. If the end brings me out all right what is said against me will not amount to anything, and if the end brings me out wrong, ten angels swearing I was right would make no difference."—*Abraham Lincoln*.

SPACE and FOOD

IN the American publication *Science*, January 3rd, 1958, Vol. 127, No. 3288) Dr. Paul B. Sears, Chairman of the Conservation Programme at Yale University, writes of "the inexorable problem of space."

Our present applications of science he describes as "selective and opportunistic, neither wholehearted nor balanced" and the unwisdom of this is reflected in our attitude towards terrestrial space. "The question is, not how many people can exist on earth, but what kind of life will be possible for those who do."

This question merits serious thought. No known form of life has been observed to multiply indefinitely without bumping up against the limitations imposed by the space it occupies, or can occupy. Is there any reason to suppose that man is exempt?

Multiplication of human num-

bers and depletion of material resources means loss of—among other things—personal freedom and dignity. That food production is not keeping pace with population increase is a stark fact and Dr. Sears surmises that within two decades "farm surpluses will be only a memory."

Meanwhile, great engineering projects are carried out regardless of ecological principles. Towns grow and sprawl over agricultural land—and no great concentrations of people is ever self-sustaining. Towns have to be fed from outside. The demand for water rises. Even the air is polluted. Ultimately we shall have to face the purely physical fact (and, it may be added, the simple arithmetical implications) "of increasing numbers on a finite area containing finite resources."

—(*News of Population and Birth Control*, No. 69, I.P.P. Federation, November 1958.)

Helicopters and Their Future

"It is impossible at this time to foresee all that can be accomplished with the helicopter, but there is no doubt that in the not too remote future it will become the leading agent for saving human lives and rendering urgent assistance in emergencies."

Dr. Igor Sikorsky made this prophecy in April, 1955, when he was in London to receive the James Watt International Medal awarded by the Institution of Mechanical Engineers and to be elected an Honorary Fellow of the Royal Aeronautical Society.

Helicopters have already begun to fulfil the important role forecast for them by Dr. Sikorsky. They have come frequently into the news as the principal characters in rescue stories. They have brought food to farmers and their livestock cut off from all other means of communication by heavy snowfalls, they have carried patients to hospital for urgent operations; and they have rescued holidaymakers adrift in small boats or stranded on cliff ledges.

"As time goes on," Dr. Sikorsky said, "the helicopter will gradually assume the leading position as a guardian of life and property in emergencies of virtually any nature."—(*The Reader's Digest*).

FOOD PROBLEM

The Biochemist's Role :—It is, or ought to be, common knowledge that three out of every five human beings in the world do not get enough to eat. What can and should be done about this by the biochemist? In the June issue of the *London Journal of the Royal Society of Arts* is a report of 'the E. Frankland Armstrong Memorial Lecture delivered by the Society on March 12th last by Mr. N. W. Pirie, F.R.S., Head of the Biochemistry Department, Rothamstead Experimental Station.

The conventional role of the biochemist in combating food shortages, he said, is three-fold; to bring more land under cultivation, to increase yield per acre and to improve the irrigation and nutrition of the soil.

Protein shortage is the paramount problem of world feeding. The use of animals as a source of protein for human food is a wasteful device. Though few, except vegetarians, will deny that animal products have a strong gustatory appeal they are a luxury almost beyond the reach of most of the world and are likely, in the grim future, to be used "as condiments rather than foods."

The main source of protein is the common green leaf. If protein could be extracted from

leaves without first having to pass them through animals the great problem of protein shortage might be solved. This has already been achieved in the laboratory but is still far from possible on a commercial scale.

The carbohydrate cellulose, though useless as a food to man, could be converted to glucose, which man can use by the action of enzymes obtainable from bacteria, fungi and molluscs.

Under present conditions "if all the bellies now in the world were filled there would be few surpluses anywhere"—and the number of bellies is increasing by about 40 millions a year.

The crux of the problem is human reproduction. If this is to continue on an unbridled course it is the biochemist's duty to produce all the food he can, but if there is to be some brake on the results of human concupiscence "research on contraception should become a major, biochemical preoccupation."

Numbers grow because death has now been controlled and because so much of the world's population is still haphazardly conceived. It is sobering to reflect that "if families contained no more members than were positively wanted there would probably be no food shortage."—(*I.P.P. Federation, News Bulletin*, No. 69, November 1958).

Athletes and Long Life

Athletes live just as long as non-athletes, states a Michigan State University study. And when they die, they die of the same causes as the non-athletes. The report comes from questionnaires sent to 1130 lettermen and an equal number of nonathletes who were matched for years of college attendance and dates of birth. On the average, the life expectancy of athletes was 65.96 years, that of nonathletes 65.97.—(*Today's Health*).

No biological product like a vaccine is 100 per cent effective, and a small percentage of vaccinated animals may still contract rabies after exposure. This small percentage is not of much importance in a mass campaign dealing with hundreds of thousands of animals, but it does represent a real danger when individual dogs are introduced into a non-immunized population.

The single inoculation procedure that is usually followed in vaccinating dogs will not protect an animal that has already been exposed to the disease.

Consequently those countries which have successfully been kept free of the disease simply by quarantine procedures, do not feel it worth while to take the risk involved in dependence on vaccination alone.

But, it may be protested, why pick out the dog and cat for special restrictions when sometimes little or nothing can be done about rabies in wild life, which often constitutes a major problem of rabies control?

The answer is that the dog has, in most instances, been shown to be by far the most important carrier of the disease to humans, and since dogs are amenable to control measures, it would be folly to permit their unrestricted movement between different countries. The wild life problem, however, has not been neglected in efforts to prevent the spread of rabies both within and between countries.

Many different wild animals give trouble in the control of rabies in affected countries; the fox in Central Europe and North America, the skunk in the United States, the mongoose in Puerto Rico and the Union of South Africa, the wolf in Central Asia, and jackals in Africa, Middle Eastern countries and India.

The only way of dealing with such wild life reservoirs of infection is to reduce the number of such animals, either by shooting, trapping or poisoning, so that their population falls below the point which is favourable for perpetuating the disease.—(*World Digest*, November 1958).

LEAD VIRTUOUS LIVES

RAI SAHIB R. R. SUKLA, Medical Officer of the Sukla Clinic in Ajmer, states that universal brotherhood, will cure many ills that afflict normal healthy social life amongst our people; and to this end he lists a dozen common-sense maxims to be followed by all people: such as universal love of fellow-beings, a spirit of

service to all without any thought of remuneration or even thanks, making other people happy, never inflicting pain to others, and following the principle of non-violence at all times etc. We are all mortal and so must always practise virtues during our short span of life and try to attain salvation.

WHY SOME PEOPLE DON'T MARRY?

DR. JACOB H. FRIEDMAN, Director of the Neuro-psychiatric Service of Fordham Hospital, New York City, is puzzled as to the reason why so many men and women do not marry. He blames a good deal of this celibacy on unconscious phobias about marriage. He says what is true:—that many people cannot or will not say exactly why they failed to marry.

According to Dr. Friedman, some men are afraid of picking up the responsibility of caring for a wife. Many unmarried men have told me they feared their health was not equal to carrying the extra burden. Others said they had to spend so much time fussing over their poor health that they had none left for a wife.

A few had had an unfortunate experience with some woman which made them decide that all women are bad. A few men and women, from an insane or epileptic family, were afraid of marrying and passing on their tendency to children.

Some men preferred to live alone, with no one around to bother them. Rarely, a man would say that he once loved a girl so much that, when she died, or he lost her to another man, he was finished with love. A number of women stated that when a fiancée died they could never love again.

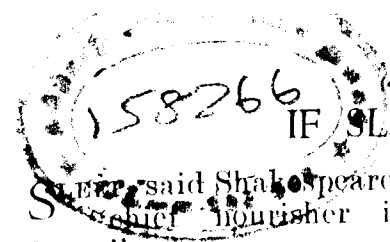
Many men said they had had to help their mother to bring up their brothers and sisters, and when this job was done, they had

lost interest in marriage. A few men admitted they were too self-centred ever to love anyone—man or woman. Some said they had not married because of a fear of sexual inadequacy. Others said they had been born with the instincts of a bachelor, or that they were so silent and moody that no woman would ever want to put up with their ways.

Unmarried women sometimes gave me queer reasons for their failure to marry. A few said they feared a sexual life or pregnancy, and a few feared to pass on to children their bad inheritance of mental illness. Many said they had stayed home to take care of a father or mother; or they had stayed to help bring up brothers and sisters. Some, after an unfortunate love affair with a man, were afraid to venture again. Some idealistic and "particular" women said they had never been able to find a man of the type they wanted for a husband. Many successful "career" women had been unable to find a man who could earn as much as they did!

Quite a few men and women failed to get married because of some physical or neurotic handicap, such as a squint, a polio arm or leg, a club foot, stuttering, spasticity, extreme shyness or a bad inferiority complex, the latter causing quite a few decidedly good-looking women to refuse even to go out with them.

—(Dr. Walter C. Alvarez, Emeritus Professor of Medicine, Mayo Foundation, U.S.A., via *World Digest*).



IF SLEEP ELUDES YOU

Sleep, said Shakespeare, is the chief nourisher in life's feast."

No one has yet solved the mystery of the complex process we know as "sleep," but most investigators agree with Shakespeare that sleep is a basic nourishment demanded by both the body and the mind.

Little is known about what actually goes on during sleep, but much is known about what happens when it is lacking.

When Paul Christman, a 20 years-old volunteer, kept himself awake for 75 consecutive hours in an experiment at the National Institutes of Health last March, he became light-headed and boisterous towards the end of the second day. Then he experienced depression and his skin felt cold.

"My senses began to play tricks with me," Christman reported. "On the third day, walls seemed to be leaning toward me and then away. Chairs and tables appeared to be bouncing around. The nurse's voice seemed to come from a great distance. The floor tiles grew alternately lighter and darker. As I walked outside, trees seemed to move along with me. For no reason at all, I broke into loud laughter. I was

so fuzzy that I even forgot the names of my friends."

It takes acute sleep deprivation to cause this kind of reaction. Paul Christman experienced unusual sensations because he was actually partially asleep. His experiences were extreme, of course, yet in various milder forms, the effects are similar when we lost even a part of the sleep we need.

An insomniac, as opposed to a Sleep Cheat, is a person who wants to sleep but cannot. Chief causes of insomnia include chronic indigestion, poor sleep habits of a spouse, night time noises, an uncomfortable bed, and worry.

If you are an insomniac, you may want to try one of the standbys recommended by sleep specialists, reading for a few minutes, listening to soothing music, or drinking a glass of warm milk. Don't overeat before bedtime. Indigestion may keep you wide awake.

Try to prepare for sleep well in advance of time when you snap off the light. Says Dr. Walter C. Alvarez, former Mayo Clinic consultant: "The man who spends a quiet, restful evening is likely to fall asleep as soon as his head touches the pillow." Such a man has "coasted" to sleep. If home methods don't help your insomnia, the next step is a session with your family doctor. Do it without delay.—(*Today's Health*, October 1958).

Diamond Jubilee of the Haffkine Institute, Bombay

Scientists of India in general and of Bombay in particular celebrated with great *eclat* on the 10th instant the Diamond Jubilee of the largest biological laboratory in the East, the Haffkine Institute at Parol, Bombay, where the plague vaccine was first manufactured by Dr. Woldemar Haffkine, a great Russian Scientist, who had had his early training under Louis Pasteur in France. He was also the discoverer of the anticholera vaccine three years earlier.

This Month's MISCELLANY

Foe or Friend?

One wide-awake, persistent enemy may be worth 20 friends. Friends point out all the good things you do. You know all about that. Your enemies point out your mistakes. Get yourself a first-class enemy, cultivate him and, when you achieve success, thank him profusely.

Influenza-smile!

The great thing in life is to get some sort of fun out of the least entertaining situations. Even Asian flu sufferers may raise a smile when they hear that this fashionable ailment is always referred to on the Soviet Radio as "Australian Influenza!"—(*Four Winds*, in *Time and Tide*, London).

Talked Into It

A visitor at an auction sale near Leeds was so much attracted by one lot—a handsome parrot in a cage—that he started bidding for it. He began with the offer of £1, and was surprised when he was gradually forced up to £50, at which the parrot became his.

When he paid the auctioneer he said: "It's a lot of money to give for a parrot. I hope he can talk."

"Talk!" said the auctioneer. "Of course he can. He's been bidding against you for the last half hour."—(*Yorkshire Post*).

Old Tom Moore had had a good week and thought he would buy his wife a present, so he picked up the table, carried it out of the house, put it on top of his head, and trotted down the road with it.

Old Bill Brown met him, and said, "Allo, Tom. Moving?"

"No," said Tom. "I'm just off to buy the missus a table cloth."—(*Leijennu Globe*).

A friend visiting an asylum inmate addressed him as "Mr. Lincoln," as he had been instructed to do.

"Don't call me Lincoln," said the patient. "I'm George Washington."

"I am sorry, General," said the visitor. "The last time I was here you told me you were Abraham Lincoln."

"True," agreed the patient, "but that was by my first wife!"

A teenage girl hung around the desk of the librarian diffidently until the latter asked: "Is there any particular book you're trying to make up your mind to ask for?"

The young one blushed and whispered, "Do you think I could borrow 'Scouting for Boys'?"—(*Tulsa Topics*).

Sole Comfort

Ah, but the only thing you can do on a shoe-string these days is a trip.—(*Saturday Evening Post*).

Simply Marvellous!

American men, they say, never know what to do with themselves when they retire from business. As one of them put it: "I get up early, read the obituary column, and if my name isn't there I go back to bed."—(*The Texas Outlook*).

"We hear a lot about atomic power, but what is the greatest water power ever known to man?"

"That's easy. A woman's tears!"

An American committee on human relations was appointed to study what men considered was "The Best Way to Hold a Wife." The committee sent out a questionnaire to a list of selected husbands. A month later they received a reply. It was from a man in prison and it said: "I found the best way was round the neck, but it should not be overdone. Please note change of address."

An Englishwoman kept two cows and used the milk for house-hold purposes. When her children were away at school, however, she found that she had a surplus of milk. Knowing that it was illegal to sell the surplus, she gave it away to deserving people in the village. Soon afterwards, an official arrived to say that even giving it away was illegal, unless the recipients were in her employ.

"Well," she asked him, "what do you want me to do with it, pour it down the drain?"

"Of course not, madam," the official replied. "My Ministry is against waste of any kind. You must draw off only as much as you require."

Hell's Bells

The ambulance flies at a furious gait:
That registers utter defiance of Fate
As clanging thro' traffic quite agile and
It picks up one person and knocks (supple,
down a couple.—(*One to a Customer*).

Unfortunate Coincidence

By the time you swear you're his,
Shivering and sighing,
And he vows his passion is
Indefinite, undying—
Lady, make a note of this:
One of you is lying.—(*Dorothy Parker*).

My day-old son is plenty scrawny,
His mouth is wide with screams or yawny,
His ears seem larger than he's needing,
His nose is flat, his chin's receding,
His skin is very, very red
He has no hair upon his head,
And yet I'm proud as proud can be
To hear you say he looks like me!

—(*Modern American Humour*, 1938).