HERALD OF HEALTH

Scarlet Fever

SKIN CARE OF THE AGING

Your Antibodies

DECEMBER 1962

WOMEN ON THE MARCH

Miss M. K. Ram

J. S. Moses

Miss Frances E. Willard (1839-1898) who was president of the WCTU for 19 years.

"WOMAN WILL bless and brighten every place that she enters and she will enter every place on this round earth." With these challenging words, Miss Frances E. Willard 88 years ago helped to set in motion an organization of women crusaders known as the Women's Christian Temperance Union. Last month New Delhi was host to the International Convention of this remarkable movement. Prohibition-minded India provided an ideal atmosphere for the conference.

Few women in recent history have made their influence felt so widely as Frances E. Willard. When the Women's Christian Temperance Union of America was founded in 1874 she became its corresponding secretary. Five years later she was chosen president and was re-elected every year until her death. In 1883 she expanded the national union into a World Organization, which today has branches in fifty-four countries and a membership of a million devoted women.

Miss Willard grew up and accomplished all this in an era when women had little part in anything beyond their own hearthstones. Not like today when they are recognized in many countries as equal partners with men in business and professional activities and even in government. Then, almost a century ago, a woman's world was her home.

Perhaps this very situation lent strength to her resistance when a demon dared to intrude into those sacred precincts which were exclusively hers. When she saw her family jeopardized, particularly her husband and growing sons, by alcohol, she arose to the challenge with supernatural energy, an energy imparted to her by the very danger which threatened her home and loved ones.

During the period following the American Civil War the liquor trade began to flourish. Many men who returned from battlefields to ruined homes acquired the drink habit. Drunkenness became rampant. Then suddenly, without apparent preparation, and certainly without direction from any central command, women began to march and pray against the saloon. This was the Women's Temperance Crusade of 1873, a heartcry from suffering women and defenceless children which went up from countless homes. Still today it stands out without parallel as a unique and remarkable demonstration of the power and influence of women upon society. A contemporary writer described it thus: "In fifty days it (the Crusade) drove the liquor traffic, horse, foot, and dragoons, out of two hundred and fifty towns and villages, increased by one hundred per cent the attendance at church and decreased that at the criminal court in almost like proportion." Within weeks the Temperance Crusade swept over twenty-three states in the U.S.A. and resulted in the closing of thousands of liquor-selling places throughout the nation. It was this unprecedented spontaneous movement that was organized the next year into the Women's Christian Temperance Union of America

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OUR COVER

Photo: D. S. Kasbekar

Someone has succinctly stated that "the art of living is the art of giving." Many today are demonstrating in a new heart-warming way an aptitude for this art as the country faces together a common peril. How often indeed it has been a little child who has unassumingly led the way, sharing some choice possession that others might be adequately fed and cared for.

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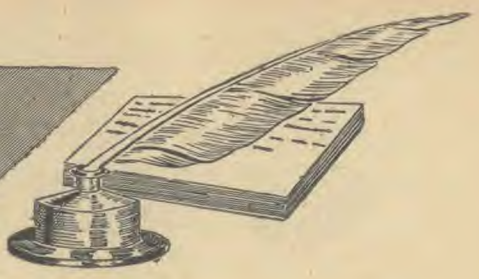
The Editor Says



"A Better World Begins with You"

"THE WORLD is at the cross-roads with its back to the wall, its neck in a noose and the atomic bomb hanging heavy over its head; otherwise it appears to be in good shape." This rather sombre and perhaps somewhat facetious statement published not long ago in a widely-read newspaper expresses the despondency modern statesmen often feel as they view the international situation today.

On the domestic front the details are of course different, but a similar sense of despondency frequently prevails. Internally there are disastrous floods and other natural catastrophes and from without threats of war. The dismal account leaves one depressed. Spiralling prices of food grains and other household necessities cause dismay to many hard-pressed bread-earners. The weekly trip to the bazaar for rations becomes more distressing each time. To make matters worse, one often gets the impression that those who are supposed to know the answers do not understand the nature of the problem. Striving to cope with forces greater than themselves, their faces appear haggard and pale. Something seems to have gone wrong with the steering gear and they do not know how to right it. "Only problems, no solutions," one harried statesman cried out in despair a few weeks ago.

But wait a minute! Before we cry ourselves hoarse or into hopeless hysteria, let's take a closer look at the situation. We might find some clue indicating a way out of our dilemma.

One observation becomes immediately obvious. There is actually nothing so irrevocably wrong with the world; the trouble is with the people. Doesn't that offer a ray of hope? We, then, are not dealing with natural and supernatural forces beyond our control so much as we are dealing with people, human beings like ourselves. Well, that's easier, isn't it? That places us on familiar ground. We know about people, because we belong to that species.

Now right here let's narrow the scope of our survey from the great mass of humanity to just one individual—YOU. The problems the world faces to a large degree grow out of attitudes and conduct of people like you. Likewise the solutions to those problems will be found in the attitudes and conduct of people like you. In short, a better world can begin with you.

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SCARLET FEVER

a tongue as red as a strawberry, sandy skin rash, and inflamed throat tell your doctor that you have scarlet fever. He must prevent complications with care.

SCARLET fever is an acute infectious disease of childhood that is much milder since the advent of penicillin. It is still a serious disease because of the possible complications and the mild cases that are overlooked. We no longer encounter the malignant form of scarlet fever, and death is rare. Mothers and fathers of today can be thankful for the advances in medicine that remove such diseases from the danger zone for their children and save many lives that in years past would have been sacrificed.

The onset is sudden, with sore throat and rise in temperature. Vomiting may occur. The cheeks are flushed, and there is pallor around the mouth and nose. The tongue is coated at first, but soon there are red spots (swollen papillæ) visible through the white film. This is known as the strawberry tongue, or strawberry-cream tongue by some. The white coating disappears, and the tongue becomes red, with the papillæ prominent, by the fifth to the seventh day. We call this the raspberry tongue.

Within forty-eight hours a fine red-spot rash begins on the neck and chest, spreads over the body but not the face. It fades on pressure, but reappears promptly when the pressure is released. In mild cases the rash may be overlooked. The rash may last a few hours to several days before it fades. Peeling may take place immediately, or not for one to two weeks. It is more marked on the hands and feet than it is on the body.

Scarlet fever is not very contagious in the early stages and first few days of the rash. Prompt isolation is very helpful in preventing the spread of the disease. The cases that go unrecognized are the chief sources of infection, which is spread by the secretions of the nose and mouth in droplet form. These droplets may contaminate the hands and articles such as handkerchiefs, linens, and toys. It is certain that germs can be found on the floors, walls, and ceiling of the patient's room. The germs can be air-borne within a room. Foods, especially contaminated milk and ice-cream, have been the cause of some outbreaks.

Streptococci have long been considered the cause of scarlet fever. There are several strains that can cause it. An epidemic may be caused by one or more strains, with first one and then the other predominating. There does not seem to be any uniformity in their occurrence.

Scarlet fever has been thought of as a disease with a rash. In recent years the early use of antibiotics and antihistamines has no doubt masked or decreased the rash, which is really an allergic part of the infection. Because of the decreased rash, no doubt, many mild cases have not been diagnosed as scarlet fever but as strep throat, a familiar phrase. Not all of these streptococci germs have power to produce toxins, which are actually the cause of the rash.

The appearance of the rash depends on the power of the germ to produce a toxin, as well as on the natural immunity of the individual. If a person has inherited or at some time developed an antitoxin immunity (antitoxins in the blood stream against a particular toxin) he will get tonsillitis or a local infection, but no rash will appear. These four factors —toxin- or nontoxin-producing germs and antitoxin or nonantitoxin immunity—plus all the strains of germs able to cause scarlet fever could very easily make a definite diagnosis difficult unless the doctor who is in charge of the patient runs tests that show

Kathryn L. Hagen, M.D.

Get your child to a doctor if he has serious symptoms.

A. C. Moses

him exactly what condition is present in each person who has a sore throat.

One attack produces protection against scarlet fever with the rash and against the particular strain causing the attack. Thus a person may have more than one infection in one year. Relapses, especially in hospital wards, do occur, but they are now believed to be a new infection contracted from a new patient in the next bed suffering from a different strain.

It is all too plain that scarlet fever with all its possibilities is still with us, only presenting itself through different strains of the same germ family.

The incubation period is from two to six days after direct contact. Generally, the more serious the case, the shorter the incubation period. Like most other contagious diseases, scarlet fever is spread by droplet sprays during the late incubation and early invasion period. Patients who develop discharging ears or glands are still a source of infection.

Immunization against scarlet fever is available. Because of the possibility of occasional severe reactions, it has not been used widely. It is of value to persons who will be constantly exposed, such as nurses working on the contagion wards.

Scarlet fever is more common in temperate zones. It is a constant potential danger in cities, causing occasional epidemics. Most cases occur in the winter and spring months.

Isolation of persons having scarlet fever should be for not less than seven days, and longer if the throat is not normal or if there are draining ears or glands. All persons coming into intimate contact with the patient should be given penicillin to protect them against the disease.

Diagnosis is made on the findings during the time of illness. A nose-and-throat culture showing the growth of a hemolytic (blood-dissolving) streptococcus helps support the findings. The white blood cell count is fairly high, with a certain type cell predominating.

Treatment is not difficult in the average case. It can be carried on nicely by the home nurse—the mother or a relative who may come in to help her. Complete bed rest, plenty of fluids, and a light diet as tolerated are indicated. Headache and sore throat are treated as indicated. Measures to control vomiting are used when necessary. Penicillin is the medicine of choice for sacrlet fever.

Complications are treated as they present themselves. Infected glands, ears, and sinuses, also acute kidney infections, can develop. The use of penicillin keeps these complications well controlled or completely in abeyance. Too many people believe that one or two shots of penicillin should clear all sore throats. Your doctor only should decide whether you need penicillin for a sore throat.

Treatment for ten days is none too long for the average strep throat in order to prevent the post-streptococcal state, which is characterized by vague aches and pains, pallor, loss of appetite, and many other possibilities. Nephritis, or kidney disease, is one of the most dreaded results. The treatment may seem long and expensive at the time, but it will be much less expensive moneywise and healthwise in the long run if carried to completion, and the germs are eradicated.

Health is to be desired above all else, because with it we can enjoy the best things in life, we can be happy and free. ***

Dr. Edwin G. Essery

your HEART and your LIFE

WELL MAY THE PEOPLE OF OLD HAVE understood that "the life of all flesh is in the blood." The heart is the great pumping organ of the circulatory system. It receives fresh oxygenated blood from the lungs, and drives it through the arteries to all parts of the body. The blood returns to the heart *via* the veins, and is again pumped to the lungs to receive a fresh supply of oxygen.

If the heart's action should be impaired or fail, then the flow of blood would be hindered or cease, and the result would be lack of oxygen in the body. All the life of the body depends upon the circulation of the blood.

Our thoughts, our actions, and every activity of the body depend upon a proper supply of fresh blood to all parts, and serious results would follow if the circulation were impaired.

The heart is subject to a number of conditions which can impair its normal function, but we cannot deal with them in this article. There are the various congenital malformations, rheumatic heart disease, hypertensive heart disease, and coronary thrombosis.

These are the four most common types of heart trouble, but it is coronary thrombosis which is the most serious heart problem of our time, especially among Western peoples, and particularly, in those nations where the standard of living is high, and the pace of life hurried.

How Coronary Thrombosis is Caused

The coronary arteries are the small vessels which supply the heart itself with blood. With advancing years the various arteries of the body tend to lose their elasticity and become partly calcified—hard (arteriosclerosis). Furthermore, the inner coat of some arteries may be affected by a patchy, fatty deposit called atheroma. The coronary and cerebral arteries are particularly subject to this condition, and they then become narrowed down so that the circulation in them is partly hindered. The complication of thrombosis (clotting) may occur in the narrowed vessels, and if the coronary arteries are thus affected the condition is called coronary thrombosis.

Who are Subject to Coronary Thrombosis?

We have said that coronary thrombosis is more common among Western peoples, but to narrow the problem down, it must be admitted that it is the middle aged, overweight type with high blood pressure who are most likely to suffer from this condition.

The stress and worry of modern life may also tend to raise the blood pressure, and thus be factors in helping to precipitate a coronary attack.

What also appears to be significant is that a rich diet especially of a too high protein content and excess fats of certain kinds, is an important factor in making the individual a prospective case of coronary thrombosis.

How the Attack Begins

Coronary thrombosis often occurs while the patient is at rest. Sometimes the pain may come on at night when the circulation is most sluggish, or the attack may be precipitated by exertion. The pain is very

severe and is caused by the affected part of the heart muscle going into spasm or cramp due to lack of oxygen. The patient usually becomes suddenly breathless; his blood pressure falls, and there is often a rise of temperature. The pulse is found to be feeble and there is shock and sweating. Sometimes there is loss of consciousness. The pain is usually in the middle or lower part of the sternum, but it may radiate to other parts, and could thus be confused with the pain of other heart trouble. Sometimes the pain of coronary thrombosis may be manifest in the upper part of the abdomen, and this, combined with vomiting and shock, may lead one into thinking that it is a case of perforated gastric ulcer, or some other urgent abdominal condition.

When this happens, call the doctor at once. There is little one can do while waiting for the doctor, except to keep the patient warm and at rest. The

G. C. Thomas
It is usually that middle-aged, overweight type that suffers from heart ailments.

ordinary "pain-killers" available to the public are not very effective in the severe pain of coronary thrombosis. The doctor will give an injection at once to relieve the pain, and issue instructions for the further care of the patient. These instructions should be carefully followed.

Complete rest is essential. Very little food should be given during the first few days of the illness, then afterward only light diet with a low calorie value of 800 to 1,000 calories should be allowed. Fluids should be restricted. No aperient should be given for a week, then an enema may also be given if required.

If great care is taken that the patient has complete rest during the first few weeks after the attack, complications are less likely to occur. It is during the first few weeks particularly, that there is danger of rupture of the affected part of the heart. There is also some risk of the extension of the clot with the possibility of a cerebral embolus.

After the first few weeks there is usually less cause for anxiety. Rest must be continued for two or three months; the soft, weakened heart muscle may then gradually become organized into fairly firm fibrous tissue, thus forming a repair which might enable the heart to carry on its work, provided it is not overtaxed.

I need hardly emphasize that the whole-hearted co-operation of the patient is vital, and that the doctor's instructions should be strictly carried out.

What You Can Do Now

Well, as always, prevention is better than cure. *Now* is the time to watch your diet, your appetite, your weight, your exercise, your worry, *and your temper.* If you are overweight try *sensibly* to reduce, and plan your affairs and contacts so that you might have a quiet life free as much as possible from worry and things that would tend to irritate or annoy. The burden which the heart has to bear, depends largely upon the person's occupation and habits, but much also depends upon the temperament. The placid type of individual tends to have a fairly normal blood pressure, but the more excitable, irascible type usually has a higher blood pressure especially when he is angry.

Years ago, a famous physician who was given to violent outbursts of anger, once said: "My life is in the hands of any rascal who cares to annoy me." Sure enough, he died of a heart attack following a quarrel!

Optimism or Pessimism?

Neither the patient nor his relations or friends need be unduly pessimistic, for there are many recoveries. But it is essential that a "coronary case" be willing to conform to the restrictions imposed upon him by a weakened heart, and plan definitely to adopt a quieter life. This does not mean that the coronary patient should consider himself a confirmed invalid. He should be encouraged to know that he can, with care, be sufficiently rehabilitated to enable him to lead a normal but quiet life.

Much also depends upon a healthy mental attitude. It is a psychological fact too, that the sharing of one's trouble lightens the burden. It can be a great comfort to the patient if he can be assured that many who suffer from his complaint, not merely survive, but are able to lead active and useful lives.

MINUTE MEDITATIONS

a time to be silent

D. A. Delafield

THERE is a time to speak and a time to be silent. Most of us accept this as a rule of life, but few of us have mastered the rule. Too often we speak when we should be silent. It is not often that we are silent when we should speak. Silence is a virtue that comes by practice, and the man who has learned to master his tongue is a perfect man.

We don't really learn to talk. We come by it naturally when we are one year old or less. But we must learn to be silent. The control of the tongue is a different matter altogether. It reaches down deep into the conduct and character of a man. Not to speak under provocation requires supreme self-control. Not to "let go" with the right answer because it may be inopportune, or give offence, takes Spartan courage. To be mum when you are inclined to flatter, or to condemn; to be silent when your words would be misunderstood; to check the torrent of wrath or praise upon your lips when nothing constructive would result, gives evidence that you possess a degree of self-mastery that will get you some place in life.

Sir Samuel Ferguson, the nineteenth-century Irish poet, once dined with Von Moltke, the German general who was distinguished as a linguist. Describing the dinner in a letter to a friend, Ferguson said, "During the dinner Von Moltke was silent in seven languages."

Remember that sound speech is worthy of commendation, but speech that is merely sound is reprehensible in anybody. You know as well as I do that most people talk too much. Observe for yourself, and see that successful people know how to make every word count. They think before they speak, not afterward. So should we.

Your speech will give you away if you don't watch out. A rushing stream collects mud. The fountain-pen that flows too freely warns that the barrel is almost empty and needs to be filled. Learn to practise silence in your speech. It will do you as much good, perhaps a whole lot more, than the too-free use of words.

VITAMIN C and its role in Tuberculosis

THE DISCOVERY OF vitamin C was due to the development of scurvy in people, when they were given a diet excluding fresh fruits and vegetables. Scurvy has been a menace to seafarers, explorers and armies since classical times. Vasco da Gama who in 1498 sailed round the Cape of Good Hope describes how he lost one hundred of his crew out of one hundred and sixty. Jacques Cartier (1535) during his exploration of Canada found that the native Indians prevented the disease by drinking a decoction of pine needles, which we now know contains ascorbic acid. Lind in his book "A Treatise on the Scurvy" (1757) mentions the value of citrus fruits and green vegetables in the treatment of scurvy. He gave patients suffering from this disease several treatments including two oranges and one lemon a day. The patients receiving the oranges and lemons showed improvement. But all this was not appreciated until Holst and Frolich in 1907 produced experimental scurvy in guinea-pigs.

The vitamin, whose absence is responsible for the scurvy, was first isolated by Szent-Gvorgyi in 1928 from suprarenal glands and subsequently from orange juice and cabbage. In 1932 Waugh and King isolated it in crystalline form from lemon juice and showed its powerful antiscorbutic activity and in 1933 it was named ascorbic acid.

Chemistry: Ascorbic acid, which forms colourless crystals, is freely soluble in water and slightly soluble in acetone and lower alcohols. If kept dry and not exposed to light, ascorbic acid is stable for considerable time. It is readily inactivated by oxidation.

Natural Sources: Fresh fruits and vegetables are the best sources of the vitamin. Generally speaking the ascorbic acid content of fruits and vegetables increases to a maximum just before ripening and then decreases steadily. Thus dried legumes and cereals are poor sources of the vitamin. However, the following is the list of fruits and vegetables which contain high amounts of the vitamin:

Fresh Fruits: Rose hips and haws, black and red currants, strawberriers, orange, lemon, grape-fruit, gooseberry, guavas, myrobalan (aonla) and West Indian cherry. There is a small amount present in pear, plum, grapes and apples.

Fresh Vegetables: Brussels sprouts, cauliflower, cabbage, tomato and new potato.

Ascorbic acid is also formed during the germination of the seeds.

The ascorbic acid content of cow's milk is very variable depending upon the fodder. The value also

drops as soon as it leaves the cow and cools down. There is a loss of 20 to 30% in the vitamin content within 24 hours even when the milk is raw.

Cooking in iron, copper or badly tinned vessels causes destruction of the ascorbic acid content of the vegetables and fruits. Stainless steel, aluminium or pyrex glass vessels have no deleterious effects. Restaurant and cafeteria meals contain very small amounts of the ascorbic acid because of the long time taken from the peeling and preparation of the vegetables to their being served on the table.

Absorption

Ascorbic acid is absorbed from the small intestine by a simple diffusion mechanism and the rate of absorption varies with the amount ingested. It has been observed by some workers that in rats about 60% of the total ingested ascorbic acid is absorbed and the rest is lost somewhere in the gastro-intestinal tract. Now after absorption from the small intestine it is deposited in tissues generally to the greater extent in glandular and least in muscular tissues, spleen and fat. Ascorbic acid is also present in the saliva, gastric juice, milk and sweat. The major part of ascorbic acid is in the cells and not the plasma. A research team led by Dr. Farmer believes that in man the absorption of the vitamin from the intestine is almost complete in health, because in normal intake the fæcal excretion is negligible.

Regarding the utilization of synthetic ascorbic acid and natural ascorbic acid much investigation has been carried out and it appears that synthetic ascorbic acid is utilized just as well as the natural one occurring in vegetables and fruits.

Functions

It has been considered that ascorbic acid acts as a hydrogen transporter in the living cells functioning as a component of a reversible oxidation-reduction system. Ascorbic acid is fundamentally concerned in the formation of intercellular substances including the collagen of fibrous tissue structures, the matrices of bone, cartilage and dentine. In the absence of the protection afforded by this vitamin the condition known as scurvy develops The vitamin is synthetized in the body of most animals, but man, monkeys and guinea-pigs are the only exceptions, so these are dependent upon a supply in foods.

Ascorbic Acid in Diseases

Ascorbic acid has been suggested for the treatment of numerous and diverse diseases unrelated to a deficiency of this substance like acute infections wherein clinically it has been found that toxic symptoms show definite abatement and the general sense of well-being of the patient is improved; principally because it is a strong reducing agent and is alleged to have potent detoxifying properties. Clinically its efficacy has also been established in the treatment of hay fever and asthma. It has also been found that the ascorbic acid assists the body to resist infection, particularly in the diseases which show an elevated body temperature.

Ascorbic Acid and Tuberculosis

Since Hojer (1924) and Bieling (1925) showed that the scorbutic state increases susceptibility to tuberculosis, more attention has been directed to the role of vitamin C in this disease. Thus Parla and Marmorston (1937) observed the favourable effect of vitamin C on increasing resistance to tuberculosis.

Getz and coworkers' (1951) extensive studies have revealed that a marked vitamin A & C deficiency occurred in men who developed pulmonary tuberculosis. Poor housing and living conditions, exposure to infections, low protein intake and hazardous occupations may have been contributory to the disease.

Now as healing in tuberculosis is characterized largely by the formation of connective tissue for which vitamin C is essential it is possible that the vitamin deficiency may delay the process of healing and thus create an unfavourable effect on the course of the disease.

A diminished excretion of vitamin C and low plasma levels have also been reported in tubercular patients, and on the basis of excretion studies it has been found that requirement of this vitamin increases in such patients.

Rai and Kehar (1941) have also observed that the average daily excretion of ascorbic acid in tubercular subjects is lower than in normal persons. These workers have further observed that if the diet of tubercular patients is supplemented with an optimal intake of vitamin C from citrus fruit juice or a single massive dose of ascorbic acid, the excretion of vitamin C increases though there is still an indication of considerably more destruction than in normal subjects.

Animal experiments suggest that the vitamin C deficiency predisposes to tuberculosis infection. Birkhaug (1939) reported that the large doses of the vitamin caused a significant increase in body weight and reduction in the tuberculosis lesions of guinea-pigs infected with tuberculosis. He also records that the vitamin C inhibits the tuberculin reaction in tuberculous guinea-pigs.

Sweany and his colleagues (1941) thought that ascorbic acid was of some benefit and prolonged life in advanced cases. McConkey (1953) thought that cod liver oil and tomato juice were helpful in preventing laryngeal tuberculosis as a complication of pulmonary tuberculosis.

—Courtesy of *Licentiote.*

Robert P. Little, M.D.

WARTS and MOLES

A WART IS ONLY a thickening of the outer layer of the skin. The true skin, or dermis, may send prolongations into the folds or wrinkles on the undersurface. It has been proved that warts are caused by a filterable virus and are mildly contagious.

Warts may have different forms depending possibly on the kind of virus and the part of the body involved.

Young Billy had flat warts on his forehead and cheeks. One day a gypsy crossed his palm with a gold piece and said impressively, "Your warts will be gone in a week."

Sure enough, they were. This story illustrates the caprice of warts, for sometimes they may seem to be witched away. Just how hocus-pocus may cause a virus disease to disappear (if it ever really does), no one knows.

Johnny Jones had seed warts on his fingers and the back of his hands, and because there were only a few, his doctor said he would get rid of them all at one sitting. After injecting novocain, he treated them with an electric needle and scraped off the shrivelled warts.

Besides the common flat warts, there are those that may grow like threads from the chin, eyelids, and scalp.

Warts growing on the soles of the feet are called plantar warts, and they may be very painful. Pressure keeps them flat, but they are always surrounded by callus. Walking causes acute pain. For treatment your doctor may use a salicylic-acid plaster or refer you to a qualified dermatologist for X-ray treatment.

Grandma Smith's back is covered with scattered brown warts of various sizes up to one-half inch in diameter. They are flat and have a greasy feel. These warts are known as seborrheic warts. They are possibly of microbic origin, for they are found most often on a greasy skin. Occasionally they occur on the face, and if they are disfiguring, a dermatologist can easily remove them.

Rarely is this type of wart the starting place for cancer. If a seborrheic wart ulcerates or grows rapidly, it should be removed and examined by a pathologist.

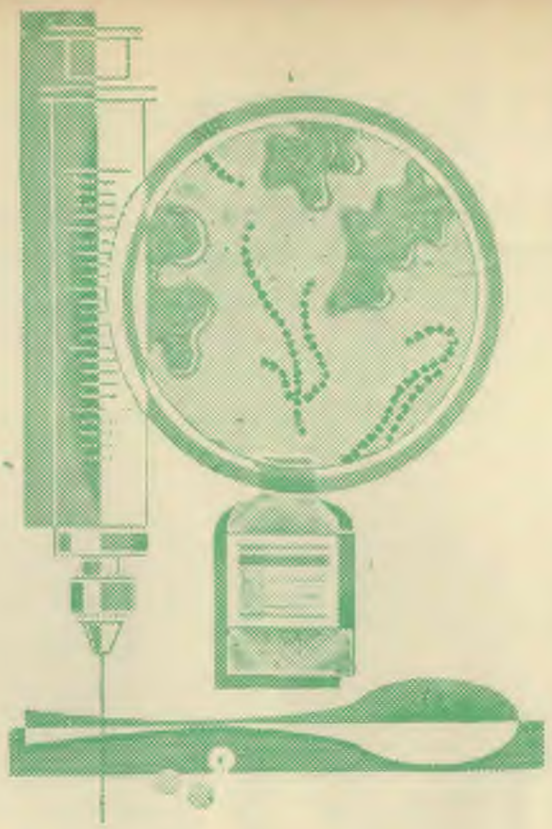
Grandma Smith also had a hairy brown mole on the side of her nose. A mole differs from a wart in many ways. It is not a virus or other infection, but a birthmark. The cells composing it are derived from the sensory nerves, and they form a little spot on the skin. The mole cells are present from birth, but only when grown enough do they come up on the surface so we can see them. This is called the birth of the mole, and it may take place in childhood or in old age.

Most moles are brown or black, and hairs may grow from them. Some moles are level with the surface of the skin, but others are prominent. Nearly everyone has at least one, and most people have twenty or more small dark moles. Sometimes moles are colourless. Sometimes, but rarely, a large portion of the skin is covered by a mole as if by a bathing suit, and at times the whole surface of the body resembles a crocodile or spiny animal. This form of growth is known as nevus hystrix, or porcupine nevus.

Most moles are harmless; they generally do not grow but may atrophy. Because occasionally a mole is the starting point for cancer, if one ulcerates or begins to grow, a doctor should be consulted immediately. A mole irritated by a belt or a collar should be completely removed.

The blue-black hairless moles are the most dangerous, and generally they should be left severely alone (unless they are irritated by the clothing or begin to grow). If necessary your doctor will remove

(*Continued on p.* 24.)



Your

Helen Spicer Menkel, R.N.

YOU ARE no doubt familiar with the wonder story of the blood. You know that the red cells carry oxygen to the body tissues and keep them supplied with food, and the white blood cells protect us from many infections.

A small boy came into the doctor's office for a blood count. Immediately he said, "Oh, I know what you are looking for. You want to see whether I have any little fighters in my blood."

Our body has ways of protecting us from diseases besides the help of the white cells.

The skin is our first line of defence, and if bacteria are able to break through this barrier and get into the blood or body tissues, they can make plenty of trouble. Sometimes these poisonous fellows sneak into our food or slip into the nose and ears and set up housekeeping. The mucous membranes of the nose, mouth, and intestines protect us from invasion of poisonous bacteria, but there are some disease producing germs that can penetrate even these barriers.

Usually a certain disease is caused by a specific organism. In order to diagnose a particular disease, the doctor must find the bacteria or virus known to cause this type of illness in the material taken from the site of the infection, from the blood, or from the tissues of the person who is harbouring the germs.

Often these disease-producing bacteria have the same chemical composition as the body cells, and as soon as they gain entrance into the tissues they attach themselves to the living cells. Each type of bacteria produces its own particular kind of poison. When the bacteria attach themselves to the cells and begin producing their poisons, the cells are not able to receive their nourishment from the blood, and soon will die.

The cells must begin their fight for existence. They manufacture specialized bodies to fight the bacteria that have attached themselves to them. These specialized substances have been given the name antibodies. If enough of these antibodies are manufactured to destroy the killer germs and their toxins, the body will be able to overcome the disease.

Even after the sickness has been conquered, the body cells continue to produce these antibodies. They find their way into the blood and tissues and form a reception committee that is ready to attack these same bacteria if they should gain entrance at some future time. The more of these specialized antibodies produced, the better our resistance to the disease.

Some bacterial and viral diseases give us a lasting immunity from further attacks, because our cells are continually making the antibodies that protect us. Others may produce only a short period of immunity, for the antibodies are not produced in great enough quantity for lasting protection.

It is an interesting fact that antibodies have varied methods for destroying bacteria. They are too small to be seen, and the only way we can know of their presence is by the reaction that takes place in the blood or skin when brought in contact with the bacteria they were manufactured to destroy. This antibody reaction is used in diagnosing specific diseases.

Let us consider typhoid fever. If the characteristic symptoms that point to typhoid are present, a positive diagnosis can be made by testing a sample of blood to determine whether the antibodies against typhoid bacteria are present.

A sample of blood is drawn, and the serum, or fluid portion, is mixed with some live typhoid bacteria on a slide or in a test-tube. When the two are mixed, something interesting takes place. You can watch the bacteria gathering together in groups. If there are a large number of antibodies in the serum, the bacteria will be clumped even when the serum is diluted many hundreds of times. When this takes place, we know that there are typhoid organisms present in the blood of this person, for the serum contains the specialized antibodies for destroying typhoid bacteria.

many disease neutralizers protect you from repeated illness.

Antibodies

Virus diseases are caused by bacteria too small to be seen by the ordinary microscope, but in recent years it has been found that these tiny killers also can be destroyed by specific antibodies.

Science has found that people can be made immune from certain diseases by the injection of either weakened bacterial toxins or killed bacteria. These inoculations cause the body to manufacture the same antibodies it would if it were harbouring the bacteria and had the disease. Before these scientific facts were known the only way that an immunity could be produced was by having the disease.

Do you see now why it is so important that you and your children be protected by these inoculations, so that they will not fall victim to these infections? Because of the wide-spread programme of inoculation, diseases such as diphtheria and smallpox have almost disappeared. Some years ago the famous Willard Parker Hospital in New York closed its doors for lack of patients. This hospital was built seventy-six years ago and functioned as a special communicable-disease centre. The coming of preventive inoculation eradicated the need for specialized hospitals for such diseases as diphtheria, smallpox, measles, and other childhood killers.

It has been only in the past few years that science has been able to produce a vaccine for the crippling disease poliomyelitis. This vaccine has forced polio to take its place with the other diseases that have been practically wiped out.

When the body cells produce these antibodies, we say there is an active immunity present. If you should be exposed to a communicable disease and have never had injections to produce the antibodies against it, you can still be protected by an injection of serum containing the antibodies. These antibodies have been built up over a long period of time by the cells of an animal, usually a horse, that has had injections of the same organism to which you have been exposed. This procedure will give you what is called a passive immunity, because it lasts only as long as the antibodies remain in your blood. It may protect you until the danger of the infection that is threatening you has passed.

Any substance injected into the body that causes it to produce antibodies against itself is called an antigen. Some of the antibiotics act as antigens, and when introduced into your system they cause your cells to produce antibodies. These antibodies cause trouble when you receive the antibiotic the next time. This reaction may result in hives, skin eruptions, and other annoying symptoms. We then say that you are sensitive to that antibiotic.

Even the horse serum that contains the antibodies is a foreign protein substance, and the body may produce a reaction to it by manufacturing antibodies against it. That is the reason your physician injects a small amount of the horse serum under the skin before giving the full dose if you have had an injection of the serum at a previous time. If the skin surface becomes red and angry, he knows that you have built up a reaction against this foreign protein at some earlier time. He will then give you smaller doses over a longer period of time to cut down the danger of a severe reaction.

All these injections must be given and taken only under expert advice and constant observation, for the production of immunity is a wonderful yet complicated advance in the treatment and prevention of disease.

There are many diseases for which no immunity has been established, such as tuberculosis, cancer, and the common cold, but science marches on with rapid strides.

***

U.S.I.S.

Lora E. Clement

Student's Guide

figs for someone else

ONE DAY in the long ago, so an ancient fable says, Hadrian, a young Roman centurion, accompanied by his staff, tramped down the long seashore street of a small town in Greece. All whom they passed gave them due recognition except one elderly man. He continued to apply himself diligently to the work he had in hand, his whole interest focused upon doing it well. If he heard the approach of the soldiers, he gave no sign.

Hadrian called a halt a few feet from the place where the old man laboured so intently at his task, and watched him with deepening interest. Finally he spoke.

"What ho! Old man, have you no salute for those who govern your land?"

Slowly the aged Greek raised himself from his bent position and looked young Hadrian full in the eye.

"Soldier of Rome," he said, "my days of saluting are over. In my time I have saluted those whose shoe latchets you are not worthy to unloose. Today I cannot lift my hand to salute."

Angry demands for his punishment came from the ranks of his officers, but Hadrian quieted them with a wave of his hand.

"Why, then," he questioned, "do I see you doing this work? Must you labour thus that you may live?"

"Not so," the old man answered. "I am not poor or in want."

The young officer spoke again:

"Old man, your days on earth are almost done; yet I find you planting small fig trees, trees that you cannot expect to bear fruit in your lifetime. Why, in your crippled condition, do you bend down and torture yourself to set out trees that will probably never benefit you?"

The old man stood as erect as he could, threw back his head proudly, and answered:

"Young soldier, despite all your fine trappings you speak the words of untaught youth. Know you not that your future greatness will be based on what you do to help those who follow you? This is a day-by-day task so long as life shall last. I hope that those who follow me may reap some benefit and enjoyment from the work I am doing here."

"So you are willing," mused Hadrian, "to bend your back in the hot sun so that someone you will never know may reap the benefit from these fig trees whose fruit will not mature for years to come?"

"Aye, sir," was the reply. "We must all learn to live so that when we pass off the stage of action, this world will be a better place because we have lived in it."

So the old man went on with his work, and the centurion passed on down the seashore, thoughtfully, and with many a backward glance.

Fifteen years passed. The erstwhile centurion now ruled over the great Roman Empire. Once more he was to pass through that small Greek village he had visited

as a mere centurion. This time he came with pomp and ceremony as emperor of the greatest state the world had ever seen. A banquet had been arranged for his entertainment, and from the fertile hills and valleys of Greece poured gifts of the best in food and drink in abundance.

At the height of the feast a messenger approached the emperor, bowed, and spoke:

"Most Excellent Sire, a man appears without who says he is a friend of the great Hadrian. He bears a basket of figs which he wishes to present to his emperor. His clothes are worn and ragged; his hands show hard toil; he is old and bent. Shall I admit him?"

A clamour arose as the emperor's bodyguards shouted: "Turn him away! Turn him away!"

But Hadrian raised his hand for silence.

"Is he armed? Is he a Roman citizen?" he asked.

"Nay, he is not armed," the messenger answered, "nor is he a Roman. He is one of these accursed Greeks, a mere slave, my Emperor."

"Let him come in," directed Hadrian. "I fain would see the man who would present me with a basket of figs."

An old, old man appeared in the doorway. His step was slow; his hands trembled as he held his gift. But he drew himself to the last limit of erectness and said:

"I know the Emperor Hadrian. He is my friend!"

Across Hadrian's mind flashed a memory at the sound of that voice. Fifteen years fell away and —but listen! The man is speaking:

"My Emperor, fifteen years ago you told an old man that he was wasting his time in building for the future at his age. His answer was that he built for those who would follow him. Dost thou remember, Most Excellent Hadrian? Little did he know then, and little did you know, my Emperor, that he was building for you! Today, great ruler of Rome, that same old man brings you the fruit of those trees you saw him planting. He built better than he knew."

Hadrian, his eyes filled with tears, reached down and took the old, old man's arm as he accepted the gift, and helped him to a seat by his side. To the amazed throng he said:

"Men of Rome! Fifteen years ago I chided an old man in this village for wasting his time setting out trees of which he could never hope to reap the fruit. In a few simple words he gave me a philosophy of life. I have tried to follow his teaching, although I never expected to meet my teacher again. But he still lives, and today he has returned to me with the results of the labour for which I chided him."

Then turning to the old, old man:

"My friend, I would confer on you the greatest honour that a Roman emperor can give"; and back to the banquet table:

"Men of Rome, behold this man who has helped to shape your empire for fifteen years. He has shown himself to be the peer of us all. Romans, behold a Roman citizen!"

WOMEN ON THE MARCH

(*Continued from p.* 2.)

and which in 1883 was enlarged to the World Women's Christian Temperance Union.

Today these noble matrons of society, wearing as their badge of distinction a bow of white ribbon, carry on a dignified campaign for world betterment. Believing in personal total abstinence from all alcoholic beverages, they work for the abolition of the liquor traffic. They do this largely through means of education. They conduct scientific studies into the damaging effects of alcohol and other narcotics on the human body. Information on this subject, as well as on the broader aspects of good citizenship, child welfare, and world peace, is imparted through some twenty educational departments of the organization.

The Women's Christian Temperance Union of India was formed in 1888. It has its headquarters now at 24 Rajpur Road, Delhi. Branches have been organized in many of the leading cities, such as Lucknow, Calcutta, Madras, Meerut, Allahabad, Bangalore, Kanpur and Bombay. The first one was opened at Mussoorie, the pilot organization for what later developed into an All-India movement. Not only in India has this work been established, but also in Burma, Pakistan and other neighbouring countries. In fact, everywhere where public-spirited women are aroused to the danger threatening their homes and society from the liquor traffic, they find in the W.C.T.U. a natural outlet for their activity to counteract it.

The great pioneers who devoted their strength and talent to build the organization in India were great mothers. They worked as presidents, secretaries, editors, hostesses and treasurers. A Mrs. Mary Clement Leavitt was the Miss Willard of this country, working as did her American counterpart, touring from city to city lecturing and organizing. Today the president of the W.C.T.U. in India is Mrs. S. M. Sagar. The world President, who presided over the convention in New Delhi last month, is Miss Isabel McCorkindale, M.B.E., of Australia. Many other names in the roster of leadership of this noble organization deserve honourable mention. They are listed not only in the rolls of their own organization, but also in the hearts of grateful citizens of many lands.

G. H. Hoehn, M.D.

SKIN CARE of the AGING

The person in charge of an aged man or woman can, by good care and knowledge, help him avoid most of the usual skin troubles, such as painful bed sores, dryness, and tenderness.

THE CLEAR, translucent top layer of your skin is the keratin layer, part of the epidermis. It protects the skin from damage. Because the keratin layer is made of dead cells, it needs no nourishment. The Creator provided this outside layer as a buffer between the body and the outside world, and it prevents the skin from drying out. It prevents air and objects from touching the skin. The live cells underneath cannot stand even the touch of air.

Your skin is highly vulnerable because of its position. The rest of your body is well sheltered. Doctors call the liver a complex and marvellous organ. It leads a very protected life down there in the dark. It is always sheltered, always warm, and always moist. It never has to meet the wind; it never has soap rubbed over it. If you were to insult any other organ of the body the way you insult the skin, you would be in trouble immediately.

The keratin layer is insoluble in water. It will soften in water, but it will not dissolve. It is insoluble in weak acids. None of the weak acids such as boric acid, lemon rinse, or vinegar rinse will bother the keratin layer of the skin. However, weak or strong alkalies or strong acids will cause trouble. Weak alkalies will dissolve it. All soap and cleansing liquids, powders, and pastes are basically alkaline, and will digest away and remove this outer layer of skin.

The aged develop a very thin keratin layer except in spots, where they develop calluses, skin horns, and other thickening of the tissues. If the patient—already with a thin keratin layer—uses a lot of soap

B. Bhansali

and water and removes more keratin, he is going to be in trouble. Soap does not clean in the same way you might wipe grime off the table, as water does. Water will wash away loose dirt, dust, pollens, lint, and any free substance on your skin. You have no need of soap to remove ordinary dirt. The only need of soap is to remove oils and greases. About the only grease the average person has on his body is his own body oil, especially an elderly person in bed. Soap only helps to take away body oils.

Soap does not clean you by simply wiping off the dirt; it peels you. Soap actually digests away a little bit of keratin and peels you as you peel a new potato or an onion. It brings a nice fresh layer to the surface, and this is fine so long as you do not do it too frequently. The elderly person often cannot afford to have these layers taken off.

When a person develops an itch or a skin rash he often tries to wash it away. Because it is something external, he uses soap, hot water, and takes several baths a day. His itch only gets progressively worse. I would say that for most of the patients who come to us with a generalized itch, particularly in the winter months, about all we have to do is cut them down to one soap bath a week. They can use water more often than that in the perspiring areas, such as the groin and the armpits, but not in the itchy areas. Patients are amazed to find that their itch is gone after this simple treatment. All we do is preserve the oil and keratin that nature provides for these people, and they get along all right.

There are no blood-vessels in the epidermis. They are all below in the dermis, the lower part of the skin. The upper layers are fed by tissue fluid that oozes around among the relatively large spaces between the epidermal cells. But this tissue fluid has to be held in, and so when these cells die they form a waterproof layer that fluid cannot get past. This waterproof layer is not deep. If you were to put Scotch tape on your skin and pull it off about sixteen times, you would get through it, and the skin would begin to ooze. Droplets of serum would ooze through it. When serum oozes through—from a burn, rash, rubbing, or contact dermatitis of any type—your body loses tissue fluid.

The average person may think that the yellowish fluid that dries on the skin is pus, so he tries to get it off. He scrubs the area vigorously, using soap and water. He is taking off more keratin so that a larger spot oozes. What may have started out as a small area, in two weeks or a month has become a large area. A large part of my work is trying to stop people from overtreating the skin. No ointment, cream, soap, special compress, or other treatment is as important as getting that keratin layer back on.

Crusts on the skin are harmful because serum that remains on the skin is a culture medium for bacteria or fungi. You should take it off without taking off this keratin layer. A cool compress is the best remover. Do not put it on hot. A hot compress is wonderful for a boil or a similar infection, but for practically anything else on the skin, use a cool or a cold compress.

If a small area is crusted, a boric acid compress is fine—a tablespoon to a quart of water. Boric acid should not be used on a large area. For a large area use a saline compress—one teaspoon of salt to a quart of water. Soak the area with the compress for about fifteen minutes. Do not leave it on too long or it will soften the area too much. This treatment ought to remove any serum on the skin, but it will not remove the keratin or irritate the skin. Many skin conditions will clear up with this very simple treatment.

We cannot tell you what is the best cream or the best lotion for the skin. People who have used one that has given them good results are usually very fond of it. Creams having bland bases without medication are preferable. Many manufacturers are putting out medicated creams with hexachlorophene to kill germs. We do not advise them, because in the ordinary case the patient's skin will take care of itself so long as you apply a little cream after the compress.

What does cream do to your skin? It acts somewhat like the keratin layer to hold in your own body moisture. Keratin is not soluble in any oil. If you question this fact, cut a small piece of a callus off your foot or a patient's foot and drop it into water, drop another small piece into your favourite oil, drop a third piece into a soap solution, and a fourth piece into a weak acid solution. You will see that the skin slowly softens in water but does not dissolve. Oil does not change it at all, for it does not dissolve skin or even soften it. The only action of oil is to hold the body moisture in. Creams are a mixture of oil and water, and they soften and oil the skin at one time.

We often use compresses, even though the skin has no exudate on it, to soften the skin. But we must put the cream on before the skin has had a chance to dry completely, while it is still soft. Remember, the water softens the skin and the oil keeps the water in so that it stays soft. Some people with dry skin rub vaseline into their skin. One treatment for dry skin is to take a bath and then immediately rub vaseline right into the wet skin, with the moisture and the vaseline mixing together. This is somewhat of a messy job, but for people who have a very difficult dry skin it often works quite well.

Vaseline is not a cream but an ointment base. One of the biggest problems with ointments is that people tend to put on too much. The only ointment that is useful is the part that soaks into the skin. The part that remains on the surface is likely to hold in exudates, cause an increase of heat in the skin, and irritate it. In our department we like to provide the patient with half an ounce, sometimes even only five grams, a sixth of an ounce, of ointment, and we tell him, "This has to do you for the area for a whole week." Some people like to apply ointment or creams deeply and put a bandage over the top. We seldom use bandages. We rarely use ointments, because they seal off the skin too completely. We prefer to use a cream sparingly but frequently.

The upper layer of the skin has no blood supply. But the dermis underneath has a blood supply, in fact, an amazing blood supply. You can take the finest little pin and stick it into any normal skin anywhere, and cannot help breaking a blood-vessel. This is really amazing when you come to think of it. Your heart pumps the blood through these blood-vessels at a pressure of 120 to 150 millimetres, perhaps even higher. Any pressure higher than 120 millimetres of mercury squeezes off that blood supply and causes a pressure sore if continued. The basic problem in preventing pressure sores is the difference between the pressure on any one point and the blood pressure inside.

All efforts toward preventing and treatment of pressure sores (called decubitus ulcers by doctors; bed sores by many laymen) are directed at getting the blood back into the area. How you do it is perhaps immaterial; the important thing is to get the blood back. Any motion the patient makes—a coughing, sneezing, reaching down to scratch himself, reaching for a newspaper, anything that twists and moves his body and his back—is going to improve circulation to his back. Anything that will make him roll also helps. That is why exercises are good. If you can get a patient—even one whose legs are paralysed—to take a sandbag or other weight and hold it in his hands over his head and rock back and forth for five minutes every hour, and thus by twisting his shoulders get a hip slightly off the bed on the opposite side, you will get blood through his pressure areas.

With a completely paralysed or unco-operative patient, preventing or treating bed sores is difficult. Turning a patient every four hours day and night is a good routine. Sometimes it is necessary to do it more often. The first sign of a pressure sore developing is probably atrophy of the skin. The skin over the pressure point begins to lose its texture, becomes smooth and a little bit thickened, but that may still not be a danger sign. This condition is common among old people. However, as soon as you see redness beginning to develop, that is the danger signal. You then need to begin more intensive care. It is much easier to prevent a pressure sore than it is to treat one. All people taking care of patients must report immediately any danger signs of pressure sores, and the patient should be put on a much more intensive routine. Changing or moving him every four hours is then no longer adequate. Such patients should be turned every hour until the inflammation has subsided.

There are different devices available to give bed patients needed exercise—slings, rocking beds that rock end to end, rocking beds that rock slightly side to side, and other devices that press up under the patient with a pumping action. But nothing has been so successful as a good strong nurse who can turn the patient over, get him on to one side. The nurse on the next four-hour shift can get him on to the other side, and the next could perhaps get him right over on his face if he can take it. If someone would develop a machine that could massage a back effectively while the patient is lying on it, he would be doing a great service to nurses.

Ultraviolet light to the back is excellent treatment. It thickens the skin, improves circulation to the area, and gets the patient off his back. I am more in favour of a lamp that takes fifteen minutes for the treatment than a big one that only takes forty-five seconds, because then I know that the patient is off his back for at least the fifteen minutes during which he is getting the treatment.

Massaging is excellent because it improves the circulation and gets the patient off his back. Tincture of benzoin can be a useful rub. But if it is put on too thickly or too often, it makes the patient stick to the bed sheets so firmly that a thin skin can be torn. Put on tincture of benzoin very thinly, allow it to dry completely, and cover with some talcum powder. It should be so diluted that it will not remain sticky. Tincture of benzoin will do a fairly good job of replacing the keratin layer that has worn thin. But it is not the real answer. The real answer is good circulation.

For cushioning pressure sores, foam rubber and sheepskin and doughnut sponges are familiar to most nurses. These articles serve a good purpose, but the basic problem is to maintain the circulation and the keratin layer.

Young people may have a layer of fat under the skin. That is what makes them look young. Some of us are losing that subcutaneous layer of fat, and the sad thing is that even though we may be fat, we still may lose this subcutaneous layer of fat and thus lose good skin texture. Our skin also loses the elastic layers. You can pull out the skin on the neck of a young person, and it will flip back immediately. If you were to pull out the skin on some older folks it would simply hang there. The elasticity is gone. This is why the skin is delicately fragile and easily bruised. The blood-vessels are thin and hard, and they bleed easily. You can see blood-vessels through the skin of aged people easily, because this subcutaneous layer of fat is gone. There is nothing we can do to replace it. It is a problem of age.

Let us talk about skin cancer and skin blemishes. I am amazed at the ostrichlike attitude of many people. A man may have four moles on his face, and every day when he shaves over them one will be cut so that it bleeds. He shaves over the other three, but they do not bleed. The fact that he makes the one bleed so often and not the others should be an indication to him that this lesion is different. The reason this lesion bleeds is not that he cuts it but that it is fragile. It is skin cancer and therefore bleeds easily.

Another danger signal is the nodule that bleeds frequently after washing. Every other lesion on the skin stays intact, even though it is rubbed briskly, but this one bleeds easily even though the person has learned to approach it carefully. Still he lets it go on month after month until it gets to be an inch in diameter, becomes an open ulcer, and can no longer be ignored.

Most skin cancers are relatively simple to care for so long as they have not spread to the lymph nodes. But the larger the growth the harder it is to remove, and the scar that is left is uglier too. Please do not be an ostrich! If you have a spot that tends to get knocked off day after day, month after month, have a doctor look at it and decide whether it is or is not a skin cancer.

Blemishes on an older person's face, such as blackheads, warts, cysts, moles, and seborrheic keratoses, are common. For the sake of appearance and safety, it is important to take care of blemishes. ***

Review

Sunshine, an English monthly for children edited by G. S. Krishnayya, M.A., Ph.D., has been well-received by schools and parents all over India for the past nine years. There is no doubt about a great dearth of good literature for school-going children and teens in India and *Sunshine* fills just such a need with versatility and scope.

Modern young scholars devour an enormous amount of literature every month in their thirst for entertainment and the acquisition of knowledge. They crave to know everything about atomic science, life in the various countries of the globe and all about stage personalities, but most available literature overstresses a few and altogether neglects some other enduring branches of knowledge.

Dr. Krishnayya, a retiree from a distinguished career in Government Educational Service is best equipped for the project he has been engaged in. In his magazine he puts in biographies as well as pen-friends, world news and household hints, science and geography as well as jokes and puzzles and an assortment of material including sports, that command ready teen interest. He says that his magazine, besides giving valuable language practice for Indian boys and girls ought to develop them into good citizens of India and serve as an interpreter between the east and the west.

Sunshine is a valuable magazine for school-going boys and girls.

Pages From

A Nature Lover's

Notebook

M. G. Champion

only GOD can make a Tree

the

clouds floated like great masses of fluffy cotton across the sky, casting shadows that drifted slowly over the valley and up the hills. But it was the shadows cast by the stately trees along our path that attracted our attention most. Not so much the shadows, but the trees themselves, those majestic giants of the mountains. As we climbed steadily upward toward the pass that would take us to the head of a side valley leading to Chamoli, those wonderful trees provided not only shade but companionship. Forming the majestic cathedral of the forest, they directed our thoughts to God, whispering inspiration that would uplift us for days, yea even years afterwards.

Soon the clouds began to thicken. Their light, fluffy appearance gave way to a grey overcast that deepened with every passing minute. The peaks disappeared. As my two Garhwali companions and I pressed on with all the speed we could muster, there was a distant roll of thunder. It echoed among the lofty heights. Scarcely had it died away when a louder reverberation seemed to shake the mountains to their foundation. Certainly, it shook the great mass of clouds above us, splashing down large drops of rain on our dusty trail. As we continued our climb, the drops joined together to form a leaden curtain of rain that blotted out all but the nearest objects. Cold trickles of water found their way down our backs and our clothes soon became cold and sodden. The path we were following was a regularly used pilgrim trail with wayside shelters at convenient intervals along the road. One of these offered cover from the storm as well as a place to spend the night, which had now overtaken us.

The room we entered had no windows and the only door had to be kept closed because of the rain and wind outside. In the semi-darkness of the closed room we attempted to make ourselves comfortable. We built a fire in one corner to warm ourselves and to cook some food. Quickly the place was filled with acrid smoke and our eyes watered until sight was impossible. Having eaten, we wrapped ourselves in our blankets and settled down for the night. We had

truly laboured in our climb that day and just as truly, our sleep was sweet.

When we pushed the door open the next morning there were our trees again, standing at attention against a beautiful background of newly fallen snow on the mountains. Not only round about our hut guarding us as sentries, but also far away silhouetted against the sky, they stood in military formation, bounding the flower-decked meadows that stretched up the hillsides to be lost in the snows. The sunlight of a new day broke over the eastern peaks and the world sparkled with jewels. What a contrast from the afternoon before! The grey was gone and the earth seemed to be covered with countless fragments of the rainbow. If any colour predominated, other than green, it was gold. The golden yellow of innumerable flowers reflected the gold of the newly risen sun. While, at first glance, the yellow stood out, the eye caught also other colours, a real display of beauty that awakened joy and harmony within the heart of the beholder. The atmosphere was crystal clear. Not a cloud spoiled the blue expanse of heaven. How much there was that seemed to demand a closer look. But it was time to set out on our journey for the day. Preparations were quickly made and we started up the trail. The grade was no longer steep, just a pleasant, easy rise. Every turn brought a change of scenery that vied with the last in beauty. Monal pheasants, with their iridescent colours, glided again and again down some steep hillside. Everything seemed to say, "Do not hurry on."

The trail eventually levelled out and then imperceptibly began to descend. The sound of the heavy shoes of muleteers, and of pack animals on the rocky path was in contrast to that of bare feet or of the cloth and rubber shod feet of the pilgrims. As we descended, the high, jewel-decked meadows gradually gave way to heavier stands of timber and ere long we entered an extensive tract of deodar. Here they were again, our friends, waiting for us, covering the hills with verdant beauty. The trunks of the trees, four, five or more feet in diameter, stood like pillars in a great temple. The blue sky above was lost to view beneath their branches. These great columns held up a canopy of green through which the noon-day sun, being scarcely able to filter, made little bright discs on the needle-carpeted floor. Every footstep was hushed. The quietness inspired a sacredness that forbade speaking above a whisper. The warmth of the sun on the pine-needle roof of the forest, distilled a fragrance of health-giving incense.

Our path followed round the shoulder of the hill and across a stream-bed, only to turn around another hill, all the while gradually dropping lower. We hardly spoke. Certainly, we did not hurry. I was busy with my thoughts, particularly thoughts about trees. They carried me back through history two or three millenniums, to the timbered hills of Lebanon. Those magnificent specimens of the forest brought a good export trade to the sea-roving Phœnicians in those days. They provided the timber for building their ships,—ships which in those ancient times sailed the coasts of Europe and of Africa. I thought of the tin mines in Cornwall, not too far from my boyhood home in Devon, and remembered my teacher saying, "These are the deepest mines in the world. Here is where the Phœnicians got their tin."

Now things have changed. There are no longer great stands of cedars in Lebanon, only scattered trees here and there on otherwise barren hills. Swiftly, my wandering thoughts returned to the

G. N. Skuce

present and to further contemplation of the cedars around me, the beautiful deodars of the Himalayas. Here on all sides were great expanses of valuable timber waiting to be used by man in countless ways. Aside from its sturdy qualities, making it useful for building purposes, it is permeated with an oil that gives the wood a distinctive odour, one that repels moths and other insects, and which serves many basic needs of modern industry. Reflecting thus on material benefits derived from trees, I went on to meditate upon values that far exceed such measurable qualities. Here in these giants of God's creation was food for the soul, health for the body, beauty that man, with his skills and tools could not improve upon or equal. For centuries these trees had stood where intrusion from the world's markets was difficult, stood untouched by the woodsman's axe and saw.

Years have gone by since that day when I walked with bowed head through that temple where God seemed near. Many times the inspiration of that day has refreshed me, imparting courage and hope. Would that I could tread again that carpeted hillside and breathe its health-giving incense. May there long be such stands of trees on the hills and in the valleys of the great Himalayas, preserved, not because of their value computed in rupees, but because of their beauty and health-giving properties. Timber we must have to supply the needs of commerce and manufacture, but may such stands never become devastated tracts of scattered trees, victims of man's predatory nature bereft of discernment regarding life's greater values. The growth of centuries,—how soon it can be cut down. How easy for the human soul to forget in blasphemous pursuit of gain, that only God can make a tree.

WARTS AND MOLES

(*Continued from p.* 13.)

them by a wide incision.

Some warty moles or birthmarks are arranged in a line along the arm, the leg, or across the trunk. They are called linear nevi.

A peculiar type of birthmark consists of thickened skin on the palms and soles, which may resemble horn. In the island of Meleda, near Dalmatia, this defect runs in families. It is called mal de Meleda, or sickness of Meleda. The trouble is incurable, but may be relieved by cutting away or softening the thickened skin.

When a group of body cells begins uncontrolled growth, the disease is called cancer.

Blond Farmer Brown was much exposed to the sun, and when he was forty-five years old he noticed a warty thickening of the skin on his right cheek. Shaving irritated it and a little ulcer that formed did not heal. Farmer Brown neglected it, and as the weeks went by, the sore enlarged and acquired a raised, pearlike border. Farmer Brown applied various salves, but the ulcer continued to grow. Although not painful, it showed no tendency to heal. One day his doctor stopped him in the street and told him the "ulcer" was a basal-celled cancer that should be treated at once. The doctor referred him to a dermatologist, who cauterized the cancer and treated it with X-ray. The resulting scar was unnoticeable, and the cure was complete.

Basal-celled cancers do not spread into the glands as do other forms of cancer, but they can be tremendously destructive, as the alternate name "rodent ulcer" indicates. Basal-celled carcinomas should be diagnosed and treated *early.*

Another type of skin cancer commonly found on the face and hands is known as squamous, or prickle-celled, cancer. This type spreads into the glands, and if neglected it is always fatal; but if treated early, the cure may be complete.

Never neglect a suspicious sore, ulceration, growth, or lump in your skin; but see your doctor at once.

Cancer detected and treated early is curable. Probably 17 million people now living in the United States of America will die of cancer, most of them needlessly.

You should avoid chronic irritation, for cancer frequently develops in old scars (especially those caused by burns) and in blond skin long irritated by the sun, X-ray, or oils and tars. A pipestem may irritate the lower lip, but bad teeth and pyorrhœa are probably more frequently responsible for cancer. Probably 95 per cent of skin cancer occurs on the face and hands of people over forty, and is caused by exposure to the sun. This fact should make overenthusiastic sunbathers pause for thought, especially blonds. Cancer of the skin is less common among women than men, possibly because cosmetics help protect the skin. Farmers, sailors, and others exposed to the sun could well use an opaque ointment made from titanium dioxide to protect their skin.

Avoid other forms of chronic irritation, including long exposure to tars and oils. See your dentist frequently, and keep your teeth and mouth in good condition. Avoid irritating your tongue and lips with pipestems and strong tobacco smoke. Possibly the greatest cause of lung cancer is smoke and the fumes from tars and oils.

Never temporize with cancer. Delay is often fatal. See your doctor *at once.*

***

Mary Catherine Noble, R.N., R.P.T.

Exercises for Boys and Girls

Part II

IN CONSIDERING physical fitness for boys and girls we should remember that youngsters develop a sense of worth by being useful, either in the family or in the community. This sense of worth contributes to their physical health just as much as does the exercise required to perform the needed task.

One writer on health makes a strong plea for a meaningful programme. Writing to educators and parents, Ellen G. White says:

"The physical as well as the mental powers should be cultivated and properly developed. The first and constant care of parents should be to see that their children have firm constitutions, that they may be sound men and women. It is impossible to attain this object without physical exercise. For their own physical health and moral good, children should be taught to work, even if there is no necessity so far as want is concerned. If they would have pure and virtuous characters, they must have the discipline of well-regulated labour, which will bring into exercise all the muscles. The satisfaction that children have in being useful, and in denying themselves to help others, will be the most healthful pleasure they can enjoy."

Such a meaningful programme, carried on as a part of the family programme of zestful living, would make formal exercises unnecessary. Some families may not be able to carry on such a programme because of living conditions. Then an exercise programme is needed.

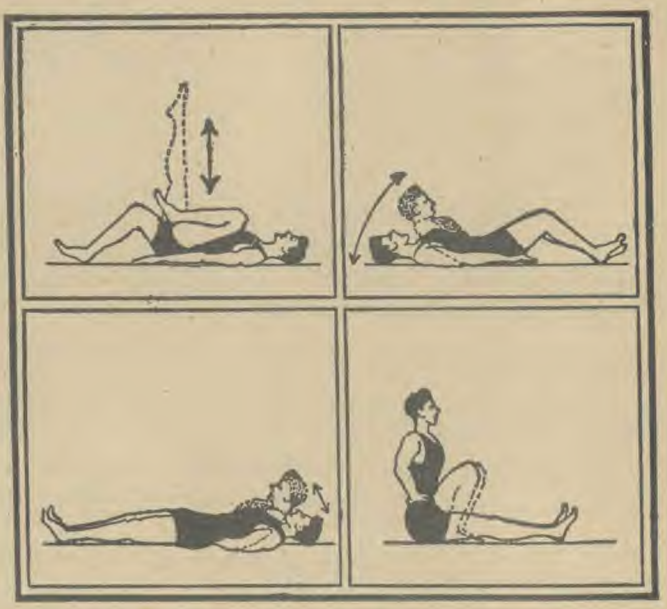
Last month we discussed exercises for arm and shoulder strength. Exercises to achieve greater abdominal and trunk strength, to maintain flexibility, and to improve agility complete our recommendations.

ABDOMINAL AND TRUNK STRENGTHENING. Four exercises are recommended for strengthening the abdomen and trunk. These are all exercises that a child can do alone.

Lying on your back on a firm surface such as the floor, with arms at sides and knees slightly bent, bring one knee up on the chest as far as possible. Then straighten the leg upward until it forms a right angle to the body. Bend it and bring it down and back to the starting position. Repeat the exercise with the other leg.

After doing each leg separately eight or ten times, try the exercise with both legs. Be sure to bend the knees and return your legs to your chest before lowering them to the floor. Lowering the legs to the floor without first bending them and bringing them back on the chest places an unnecessary strain on the lower back.

Still lying on the back, you will begin the second exercise by raising the head and shoulders off the floor, then returning to the starting position. Bend your knees so the soles of your feet rest on the floor. Do not use your arms or elbows to push the body up. Coming to a sitting position is not the purpose of the exercise. The purpose of the exercise is to get



the head and shoulders off the floor without completely sitting up.

The third exercise requires more strength and should only be started after exercise No. 2 has become easy. In the back-lying position, legs straight, place the clasped hands, palms down, in the small of your back. Lift your head and pull your shoulders and elbows up off the floor. Hold this position while counting to four. Return to the starting position.

Do the last exercise sitting up, with your legs straight out in front of you. Place your hands on your hips.

With a quick, vigorous motion, bend your knees, and with toes barely touching the floor, drag the feet backward toward your hips. Then straighten your

(*Continued on p.* 36.)

CHILDREN'S QUESTIONS

Harold Shryock, M.D.

"DID YOU KNOW before I was born that I was going to be a boy?" four-year-old Tommy asked his mother.

"No, Tommy, I didn't know whether you were a boy or a girl until the doctor told me right after you were born. But I'm glad you are a boy—just as glad as I was when I learned that your sister was a girl. Aren't you glad you are a boy?"

This mother took Tommy's question at face value, did not act embarrassed about having to talk about such matters, and gave Tommy a straightforward answer. She is a wise mother.

Perhaps Tommy will have other similar questions. If so, his mother should answer them in a similar unemotional way. Because she did well in answering his first qustion, he will doubtless come to her with the others, and her answers may satisfy him for several months.

The mistake that many parents make is in giving their children the impression, one way or another, that sex is something that should not be mentioned. Of course, a parent should help his child to realize that there is always a proper time and place for such matters to be discussed. The child must understand that these questions should not be considered with people outside the immediate family.

A child's curiosity about biological facts is so strong that he will keep trying to find the answers to his questions if his parent does not satisfy him at the first attempt. A parent should face up to this task, deal honestly and openly with the child, and handle the matter in such a casual, friendly way that the child will feel at ease about returning when he has other questions.

Many a parent has unknowingly handicapped a child in his adjustment to life by throwing an air of mystery or taboo around the conversation when he asks for information about life and sex. Many a young woman has been handicapped in her adjustments to marriage because when she was a girl her mother implanted the idea that all sex is vulgar.

Many a young man has sown wild oats because his father would not satisfy his natural curiosity by giving him frank answers to his questions, or because his father was so aloof about such matters that the son dared not ask him for information.

Parents have a moulding influence on their children. This influence is exerted more by example and attitude than by the actual words used, particularly in matters of the realities of life. In a home where father and mother are congenial, happy in each other's companionship, and natural in their expressing of affection both to each other and to the children, the children will grow up with wholesome attitudes toward life.

Telling About Sex

When should I explain to my child about sex life?

The mother of a five-year-old child asked this question.

A child's education in matters of sex begins when the child is six to eight months old, when he begins to explore his body. The babe does not obtain any specific information at this time, but he begins the basic attitude he will carry into childhood and adolescence.

Parents should be perfectly casual in their attitude toward a child's exploration of his body. They should indicate their respect for the human body without appearing shocked because the child is curious. This attitude will give the child an advantage in his adjustment to life, for he will realize that sex is a normal and natural part of life.

Even when a child comes to the age when he has specific questions about sex, he cannot be taught all he needs to know in one conversation. He can understand a little now and a little more later as his brain develops and his understanding increases. A child of three or four years may have some questions about where babies come from. He may be curious about the physical differences between boys and girls, men and women. As he becomes older he will want to know about the physical relations between husband and wife. As he reaches his teens he will have questions about marriage.

Perhaps the best guide for knowing how much to tell a child is to give honest answers to the questions he asks. When he receives a frank answer, it may be some time before he returns with another question. In the meantime he has been thinking things through and assimilating the answers to his previous questions.

It is not wise to evade a child's question on sex or postpone the answers. This will only make him more curious and encourage him to find his answers elsewhere. If the parent does not know the answer to a question the child asks, let him say so frankly, find the answer, and tell the child what he wanted to know.

Explaining Childbirth

How can I explain conception and childbirth to my twelve-year-old boy?

It is much easier to explain the marvellous process of childbirth to a youngster who has had pets than to a child with no knowledge of the basic facts of biology. But even a child who has been reared in an apartment may be taken to the zoo or to the home of friends in the country.

Depending on whether the boy has some previous knowledge of the facts of life, it may or may not be wise to give the entire answer on childbirth at a single sitting.

The discussion can properly begin with the essential differences between the organs in a mother's body and in a father's body. Every human body contains glands that produce chemicals the body needs in order to carry on its functions. Among these glands are the sex glands, which in a woman produce chemicals that cause her to be feminine. In a man they produce chemicals that cause him to be masculine—cause his voice box to develop in such a way that his voice is deeper than a woman's and stimulate the growth of whiskers on his face.

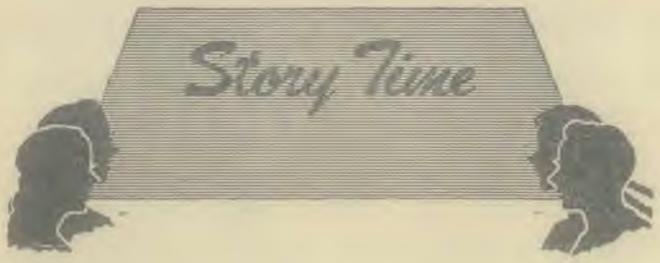
The sex glands produce cells that contain the spark of life by which parents can produce children. These special cells are called sex cells.

In order for a new life to be started, a sex cell produced in the father's sex glands must unite with a sex cell produced in the mother's sex glands. By

(*Continued on p.* 31.)

A Wonderful Party

Rita F. Snowden



HAVE you ever been to a party? I want to tell you about a lovely party that a little boy called Antonio went to. He didn't know that he was really going till the last.

One night little Antonio—he was only ten—was sitting quietly in the house modelling with clay. He was very fond of making things of clay. His mother sat beside him busy at her work.

Before he had finished what he was doing, there was a knock at the door. Who could it be? Antonio's mother put down her work and went to the door, and it was their cousin, Thomasso, the Duke's cook from up at the castle. As soon as he came in they saw that he was troubled.

"What is the matter, Thomasso?" asked Antonio's mother.

Poor Thomasso, with worried face, answered: "The trouble is a party."

"But parties are not a trouble," said Antonio and his mother. "They are good fun!" Not that Antonio and his mother had been to very many parties—they were poor.

Cousin Thomasso, the cook from up at the castle, then began to explain. "You see, the Duke has ordered me to make something special for the centre of his party-table by this time tomorrow, and I can't think of anything to make. I made him a little castle and dragons of pastry last time, and the time before that I made sugar birds and trees. And I made him a biscuit crown with red candied cherries and green gooseberries stuck in it for jewels. He wants something new. And something special, and I can't think of a single thing."

"Go on thinking, Cousin Thomasso," said Antonio's mother. "You will think of something."

But poor Thomasso was so worried he was rather rude, and he stamped out and closed the door saying: "Go on thinking; is that all you can say?"

"What a pity you cannot help Cousin Thomasso," said Antonio's mother, after he had gone. Antonio fell very silent, and began to think.

Next morning at sunrise he was knocking at the kitchen door of the castle. "Cousin Thomasso," he said, "I've thought of something."

"What is it?" asked Thomasso.

"I cannot tell you," he said, "but give me a little room where I can work by myself, and give me a pound of hard butter on a table, and I will show you."

So Cousin Thomasso showed him where there was a little room, and a table, and a pound of nice hard butter on a flat dish.

Antonio worked away with his clever fingers for hour after hour. When it got near the party time Thomasso put his head round the door to ask how things were going.

"Wait a little while longer," said Antonio. "Give me a few more minutes."

Then Thomasso went in and, to his complete astonishment, on the table in the little quiet room was a beautiful lion modelled out of butter. Thomasso clapped his hands. It was truly a beautiful lion, from its finely-formed nose and shaggy mane to the tip of its tail. "Now the party will be a success!" he exclaimed.

When the Duke and all his friends came in to the party the Duke took a quick look at the

table, and the first thing he saw was the butter lion right in the centre. He was delighted. He said: "Who would have thought of doing such a beautiful thing! I have in Thomasso the cleverest cook in Italy." And he called in Thomasso.

But when Thomasso heard the praises of the Duke he felt he had to tell him the truth. At first the Duke could hardly believe his own ears, but soon he sent out and had little Antonio brought in.

At first, when Antonio came in to the Duke and the great people, with all their beautiful jewels and dresses and twinkling lights, he was shy and would hardly look up. But when he heard the words of the Duke he was full of joy.

"The boy is a wonder," said the Duke. "He must be properly trained."

And he sent him to a very famous master who carved in stone.

Antonio became the most famous sculptor in all Italy. Soon he had done for the Duke a beautiful carving in stone. And if you ever go to Paris, and to the beautiful gallery there called the Louvre, where they keep all the treasures, you will be able to see some of Antonio's carving in stone. His fame spread far beyond France and Italy. Whenever men and women talked about beautiful carving in stone, they always talked of Antonio Canova. That was Antonio's other name.

He died in 1822—over a hundred years ago—but years before that, his name was written in the golden book of the Capitol, the greatest honour that could come to anyone. Little Antonio had done good work on butter, and so the chance came to do beautiful work on stone. If he had said: "It's only butter. It won't last, whatever I do. It's not worth bothering with. I'd like to be carving in stone," nothing would ever have happened. He would never have gone to the party. And he never would have become famous.

anti-smoking campaign in the USSR

Alexei Nikolin

YOU WON'T FIND a single advertisement in the Soviet press, TV or films, urging readers and viewers to buy this or that brand of cigarettes, cigars, pipe tobacco and so on. That fact, of course, makes it all the easier to combat smoking.

Some Soviet medical men have demanded, in articles printed in the newspaper *Komsomolskaya Pravda* and elsewhere, that cigarettes be marketed in unattractive packages, bearing a "Poison!" label. That, however, was regarded as too extreme.

Some say it would be far better simply to prohibit the manufacture and sale of tobacco. But this is not really a good idea. You don't conquer habits like smoking merely by wholesale bans.

Soviet trade regulations forbid the sale of cigarettes and matches to customers under 16.

The schools are particularly active in combating smoking among adolescents. Secondary school pupils, irrespective of their age, are strictly forbidden to smoke. Smoking is considered a violation of school discipline. This is a general rule for all secondary school pupils. Lectures on the harm of smoking are provided in the natural science classes.

Medical publishing houses put out every year popular anti-smoking booklets, in editions usually exceeding 1,000,000 copies, as well as leaflets and posters explaining and illustrating the evils of smoking. Periodicals and the press and television are also frequently used for this purpose.

Soviet film studios have in recent years presented "Don't Smoke! A Cigarette is to Blame" as their vivid contribution to the anti-smoking drive. Shown often before a main feature, these shorts graphically illustrate the harmful effects of smoking and offer useful advice as to how the habit can be broken.

Very often when a person decides to give up smoking after years at it, he complains of severe headache, dizziness, irritation, and so on. Medical assistance is available for such persons, and P.T., hypnosis and psycho therapy have all proved most helpful.

Not only smokers, but also other people in tobacco-smoke filled rooms suffer. There is, therefore, *no smoking* in very many public places in the Soviet Union. You won't see anyone with a lighted cigarette in cinemas or theatres, on trams or buses or on the underground.

Smoking is forbidden, too, in many work premises.

More and more smokers in the USSR are giving up the habit. And incidentally, very few Soviet women smoke.

—USSR. I. S.

The Doctor Answers

DANDRUFF: *Ques.*—Can you suggest a treatment for excessive dandruff?

Ans.—Dandruff may be the result of excessive secretion of oily material from the glands about the roots of the hair; or of infection of the scalp in which certain bacteria become very active and cause skin irritation with flaking of the skin.

There are various treatments used in allaying dandruff, but we think one of the best is cleanliness. Thoroughly wash the scalp with a soft soap several times a week if necessary to keep the condition under control. The treatment preferably is carried on under supervision of a physician, who will watch for the particular reaction the patient has to soaps or other cleansing materials.

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DIZZINESS: *Ques.*—What causes dizziness?

Ans.—The causes of dizziness are many and the following are the few important ones:

Anæmia, or a lack of sufficient red blood cells in the body, is usually associated with dizziness, weakness, and fatigue.

High blood pressure is frequently associated with dizziness, although symptoms are often absent altogether.

Often dizziness occurs by itself and is so severe as to prevent one from being on his feet. The onset is rather sudden, and the dizziness lasts from three to six weeks. Any motion of the head aggravates this dizziness and may cause vomiting. This condition is called Meniere's disease and is caused by swelling, tumours, inflammation, or hæmorrhage into the semicircular canals of the ear; or inflammation or tumour of the vestibular nerve coming from these semicircular canals. This condition constitutes one of the most severe forms of dizziness.

Dizziness is also associated with a sudden drop in blood pressure.

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BERIBERI: *Ques.*—Please tell me the cause and treatment of beriberi. Can a complete cure be expected?

Ans.—Beriberi is a deficiency disease in which vitamin B_1, or thiamin hydrochloride, is lacking. It occurs commonly in areas where a large amount of polished rice is used. The natural vitamin of the rice is directly under the hull, and when the grain is polished this vitamin is lost. If such rice is used freely as a food, a serious condition results, revealed in a variety of symptoms. There is lassitude and itching of the skin. There may be painful nerves, generally over the body or in local areas. Frequently vomiting and diarrhœa occur. There is fatigue out of proportion to the patient's activity. The heart may beat rapidly, be enlarged considerably, and the limbs be swollen. There is often tenderness and soreness of the muscles. These symptoms may not all be present in any one patient, but various combinations of them will be found.

Thiamin hydrochloride in large doses should be given several times a day. Usually the response is prompt and the recovery complete, if too much damage has not been done to bodily tissues. We are not aware of any damage resulting from taking liberal amounts of the vitamin.

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BREATHLESSNESS: *Ques.*—How can breathlessness due to heart trouble be distinguished from that due to simple overweight or anæmia? What type of rest is most beneficial?

Ans.—At first the breathlessness due to heart trouble comes on only after moderate exercise, but as the degree of heart failure increases it comes on after slight exertion and finally even when the patient is absolutely quiet. Besides exertion, position is an important factor. Four reasons are usually given for this: (1) It is said that the blood flow through the heart is greater when reclining than when in an upright position. The effect of gravity in the upright position relieves the heart of about one-fourth of the blood which circulates through it when the patient is reclining. (2) The lungs are less engorged in the upright position. (3) In the upright position there is more room for breathing and a freer heart action. (4) There is less stimulation of the respiratory centre of the brain. Consequently, the cardiac patient voluntarily assumes the upright position and chooses to sit up in bed or in a chair.

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

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

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

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

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

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

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

SEDATIVES: *Ques.*—I am suffering from acute insomnia. Is it wise for me to use sleeping drugs?

Ans.—Sleeping drugs should be looked upon as purely emergency medicines. Sleep derived from their use is never equal to normal sleep. There are times, however, when it may be better to take a small dose of a mild sedative than lie awake too long. In this way one may get back into the sleeping habit. Farmers and other hard-working, out-of-door people seldom if ever have to resort to a drug, as the normal fatigue following a day's labour out-of-doors is better than drugs. Sleeplessness is the price we pay for sedentary, indoor, civilized living. Walking from three to eight kilometers daily will after a short time, usually cure insomnia.

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PILES: *Ques.*—What causes hæmorrhoids (piles), and what can be done for them?

Ans.—Hæmorrhoids are caused by an enlargement or swelling of the veins in the rectum. These veins are enlarged and distended with blood due to a pressure higher up in the abdomen or pelvis. The common causes for piles are childbearing, sedentary work where one sits in one position for long periods of time, or standing on the feet for long hours.

Piles are varicose veins of the rectum similar to varicose veins in the legs. The treatment is surgery, if they are at all severe. The pile can be removed by a simple operation, and great relief is experienced. If one has hæmorrhoids which protrude now and then, these can usually be taken care of by the use of suppositories. Any person with piles should have a thorough examination of the rectum, because sometimes the hæmorrhoids are due to obstruction of the venous channel higher up in the pelvis. This may represent a tumour or cancer at this higher level. A complete and thorough examination would reveal such a condition.

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THYROID TABLETS: *Ques.*—Can one take thyroid tablets, one grain per day, for the rest of his life with safety? My doctor has recommended this. I think I have read where thyroid tablets are harmful when taken over a long period of time. Please tell me.

Ans.—Thyroid is useful in the treatment of certain diseases. If thyroid tablets are taken indiscriminately without medical supervision or without medical need, then, of course, they can be harmful. However, many people have to take thyroid tablets over a long period of time, and their health is greatly improved by so doing. And in some cases it is necessary to take them for the duration of the patient's life. With adequate medical supervision, however, this is perfectly safe. Only the doctor handling your case can make the decision as to whether this is necessary in your particular circumstances or not. So rely on his good judgment, and if he sees signs of taking too much thyroid, he will, of course, either reduce your dosage or discontinue it.

CHILDREN'S QUESTIONS

(*Continued from p.* 27.)

this union of sex cells it is possible for a child to resemble both his father and his mother. The sex cells carry the personal traits of the parents to the child, and he becomes like them in appearance and personality. The union of these two important cells takes place inside the body of the mother.

When a new life begins, it is small and delicate. It requires nine months of development and growth within the mother's body before it can live outside its mother's body. At the end of the nine months (or slightly sooner in a few cases), the baby leaves the mother's body by a process we call childbirth. Then it is possible to know whether the child is a boy or a girl. Such a discussion should be accompanied by charts or diagrams from library books or in bulletins and booklets designed to help parents in sex education.

A Girl Approaches Maturity

How can I tell my ten-year-old daughter about menstruation?

The mother who asks this question is to be congratulated for wanting to help her daughter understand in advance the changes that will occur in her body when she reaches the age of adolescence. Many girls whose mothers are not so understanding are allowed to enter womanhood ignorantly and are terrorized at their first menstruation.

This is a matter a mother should bring up if the daughter does not ask questions. Once a girl is properly informed, her first menstruation will be a welcome evidence of her arrival at womanhood. Not properly informed, she may be so alarmed as to carry the unfortunate impression through life that being a woman is a handicap or even a disgrace.

As with other considerations of the intimate functions of the human body, a mother should not try to tell her ten-year-old daughter the whole story at one time. She does well first to consider with her the simple facts of pregnancy and childbirth. With this foundation the girl is ready to understand that the organs of motherhood follow a monthly cycle of function, beginning at 11 to 15 years of age. Each month the organs of motherhood prepare to take care of an unborn child. Each month, unless motherhood actually begins, the organs that became ready to maintain an unborn child abandon their readiness and start all over again. At the time of this change, certain tissues inside a woman's uterus (womb) are actually eliminated and destroyed. This accounts for the experience of menstruation, when for three or four days a woman loses tissue and blood from her organs of motherhood. ***

EDITORIAL

(*Continued from p.* 5.)

Isn't that heartening? Now, looking at it that way, you needn't feel so frustrated. You are no longer like a passenger riding in a bus plunging downhill out of control; you are the driver. Your fate, and consequently that also of others travelling with you, is in your own hands to a great extent.

Now let's spell this philosophy out in terms of daily life. There seems to be, for instance, a lot of dishonesty nowadays. In fact, a cumulative impression gained from reading the news is that the very atmosphere is infected with corruption. "It's appalling," laments one. "It's shocking," cries another. Well, we would like to ask, Who's dishonest? Readily comes the reply, "The politicians, the officials, the merchants, even the peons, everybody." But "everybody" takes in you. And that brings us face to face with the question all of us must ask. Am I dishonest? Are you? If so, then let's do something

about it. And as we do, we shall make a significant beginning in making our world a better place. Do you see?

Another problem seems to be an increasing tendency towards mob spirit and violence. Riots break out over the slightest provocation. Hooliganism has become a distressing social evil. The police seem unable to cope with it in many instances. "Whatever can be done?" wail the bewildered onlookers. We think the national integration planners helped to answer this question very admirably in October this year by suggesting that each citizen sign a personal pledge not to resort under any circumstances to physical violence "whether in my neighbourhood or in any other part of India." The pledge begins with the significant word "I." That plunges us right into the heart of the matter. If I and you and he—all three persons of society as well as of grammar—will sign and keep that pledge in our homes and neighbourhoods, then already the world will have become better. The improvement has to start with someone, a person. Why not with you?

There is a lot of heart-searching nowadays about the fall in moral standards. If the decline continues, Dr. Rajendra Prasad soberly pointed out in a recent address, it would render the country's economic progress meaningless. "There needs to be an ethical and spiritual revolution," declared another prominent speaker on the same occasion. These leaders take no pleasure in such jeremiads, but, acting responsibly, they must call attention to these real dangers threatening the nation. But here again neither we, nor they, need despair. The term "moral" pertains to the realm of people, always. This is a problem we as individuals can do something about. We don't have to call a meeting or print a magazine or start a crusade in order to do this. Just hold a conference with yourself. Determine within your own soul that you are going to be upright and dependable, honest and fair in your dealings with others. And what you do will influence others. And soon there will be an upward turn in morality, because of you.

"You and I cannot take care of the whole nation," as someone has said, "but we can do such a job in our own small corners, that others may notice the light and begin to imitate us."

Dorothy Jones sums it all up vividly in the words of a short poem:

" 'Your task—to build a better world,' God said.
I answered, 'How?
The world is such a large, vast place,
So complicated now.
And I so small and useless am,
There's nothing I can do.'
But God in all His wisdom said,
'Just build a better *you*.' "

—T.R.T.

Science on the March

Chemical Weapon Against Cancer

A U.S. physician's research shows promise of controlling many inoperable localized forms of cancer. Dr. R. D. Sullivan of Boston's Lahey Clinic pumps the drug "Methotrexate" into blood-vessels supplying the cancerous area for one to four weeks. Because the drug is toxic to normal cells, the patient is given periodic injections of an antidote called Leucovorin. The drug fights the cancer directly while the other minimizes toxicity.

"Methotrexate" was previously reported as the first chemical agent to effect five-year cures in women suffering from a rare form of cancer called choriocarcinoma.

Dr. Sullivan reported these results on advanced inoperable cancers of the head, brain, neck and pelvic regions. Tumours in 16 patients disappeared. One patient has been free of cancer for three years since the treatment. Tumours in 47 patients grew smaller. In some, the cancer is now small enough to be removed by surgery.

The technique is so promising that doctors from 12 countries have asked for and received the drug and details of the "pumping" technique.—UNI-DPA.

—The Times of India.

New Milling Technique Raises Rice Value

Scientists in the United States have developed an improved technique for milling rice, which has now been tried on a commercial scale. Milling trials with more than 150 samples of rice employing the existing rice milling equipment showed that much rice is broken before milling begins and that the greatest amount of breakage during milling mostly occurs in the first and second hullers where the bran is removed from the rice kernel. It has been shown that pre-treatment of brown rice (rice with bran intact) by steaming it and adding abrasives before the scouring operation, assists in the removal of the bran, thereby decreasing the severity and amount of scouring required. The capacity of the plant is also increased by 20 to 30 per cent. Application of the improved technique results in less breakage and therefore higher yields of head rice. Temperature and relative humidity in the milling room also affect the yield of head rice, the optimum relative humidity being 70 per cent. Four to six per cent higher yields were obtained when the relative humidity was changed from 30 to 70 per cent with no change in the temperature.

—Health & Welfare.

Fresh Water with Aid of Atoms

The Government of the United States of America is attempting to apply the atom to the age-old problem of turning salt water into fresh water.

The Atomic Energy Commission and the Interior Department joined forces in a new research programme. The Government, conscious of the alarming shortage of usable water at home and in many parts of the world, is mounting the world's most comprehensive research programme to seek solutions.

Studies of saline water conversion will begin immediately at EEC's Oak Ridge National Laboratory in Tennessee. The studies will involve basic research of the chemical properties of water and the technology of materials in aqueous solution.

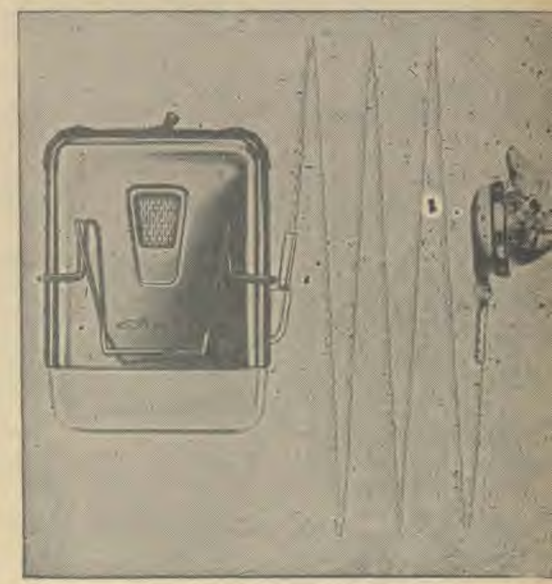
—U.S.I.S.

India's First Hearing-aid Factory

India's first hearing-aid factory has gone into operation in Bombay, manufacturing ultra light-weight transistorized types. Made by Arphi Inc., in collaboration with the American Danish Oticon, these hearing aids will go a long way to relieve the suffering of thousands of deaf in this country. The aid consists of a miniature electronic amplifier with a microphone and a earphone. Sound vibrations are picked up by the microphone and amplified thousands of times and fed to the earphone which is placed in the patient's ear.

In cases where there is severe conductive loss, without serious impairment to the auditory nerve, the bone conductor is supplied. Placed on the mastoid bone immediately behind the ear, it mechanically vibrates the bone, transmitting the sound impulses to the auditory nerve.

The standard as well as the super powerful aids to be manufactured



will permit as many as 32 variations in their frequency responses. This will help restore not only the hearing losses, but also the tonal balance of the patient.

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JANUARY: Headache, White Spot on Lip, Asthma, Scaly Skin.

FEBRUARY: Frequent Urination, Height Increase, Polio Infection, Excessive Perspiration.

MARCH: Pyorrhœa, Excessive Use of Coffee, Sciatica, Eye Trouble, Nose-Bleed, Leucoderma.

APRIL: Dry Skin, Sinus Trouble, Back Pain, Hair Sprays, Sore Throat.

MAY: Heart Disease, Swollen Glands on the Neck, Parkinson's Disease.

JUNE: Calluses, Plastic Surgery, Dreams and Nightmares.

JULY: Cerebral Degeneration, Eosinophilia, Body Odour, Running Nose.

AUGUST: Loose Teeth, Dandruff, Chronic Catarrh, "Grand Mal" Epilepsy, Asthma, Hair Sprays, Calluses, Sore Throat, Disfiguring Scars.

SEPTEMBER: Constipation, Toadskin, Nephritis, Early Osteo Arthritis.

OCTOBER: Bronchiectasis, Sweaty Feet, Ulcerative Colitis, Premenstrual Tension, Premature Puberty, Swollen Thyroid Glands.

NOVEMBER: Depressed Chest, Blue Babies, Nephritis, Convulsions, Drink Habit, Vasectomy, Diabetes, Vitamins, Smallpox Vaccination, TB Skin Test, Soybean Oil.

DECEMBER: Dandruff, Dizziness, Beri-Beri, Breathlessness, Sedatives, Piles, Thyroid Tablets.

Athletes

Science on the March

JANUARY: —

FEBRUARY: "Artificial Kidney", Catering College for Delhi Soon, New Antibiotic Drug for Tropical Skin Diseases.

MARCH: "Memory Box" for Airplane Pilots, Hydrofoil Ship, "Heart Machine", Pipelines for Transportation, Electricity Reduces Cancer Pain, Instrument for Circular Suturing of Blood Vessels, Syringes Sterilized by Irradiation, Aluminized Cloth Will Keep People Cool or Warm, Special Diets Prevent Tooth Cavities.

APRIL: Blindness in Ancient Babylon, What Is Blindness? In Blind Company, Acts of Violence, Thirty Years Ago, Eyes and Nutrition, Blind Workers, The Blind in Russia, Newspaper for the Blind.

MAY: Nature's Multi-Vitamin Pill, New Vaccination Method, British Success in Trials With Oral Polio Vaccine, The Atom in Medical Diagnosis, Anti-Cancer Vaccine.

JUNE: British Foundation to Fight Blindness, Steel Cloth for Parachutes, Warning on Use of TB Drugs, New Drug Against Smallpox, Tiny Lamp.

JULY: Tiny Radio Reports Condition of Stomach, Cholesterol and Smoking, Bharati Braille, Cause of One Form of Pneumonia Isolated.

AUGUST: Artificial Kidney Helps in Treatment of Acute Malaria, New Treatment of Heart Ailments, Face Fact, Cigarette Irritation and Cancer, Growing Leprosy Germs in Test-Tubes, Tiny Lamp.

SEPTEMBER: Clue to Transplanting Organs, Red Blood Cells Frozen, New Methods of Treatment for Sleeping Sickness Possible, Viruses Cause Some Forms of Cancer?

OCTOBER: Indian Ocean Expedition, Himalayan Plant Shows Promise as Cancer Cure, Radiation Protection, German Measles Virus Found, Matchbox-sized Valve Aids Disabled, Checking Dental Decay.

NOVEMBER: Common Salt Could Help in Fight Against Malaria, Vaccine Ready to Combat Mysore Virus, Vegetable Protein, Artificial Blood Vessels, Carbon Monoxide Poisoning.

DECEMBER: Chemical Weapon Against Cancer, New Milling Technique Raises Rice Value, Fresh Water With Aid of Atoms, India's First Hearing Aid Factory.

Great Names in Medical History

Pages From a Nature-Lover's Diary

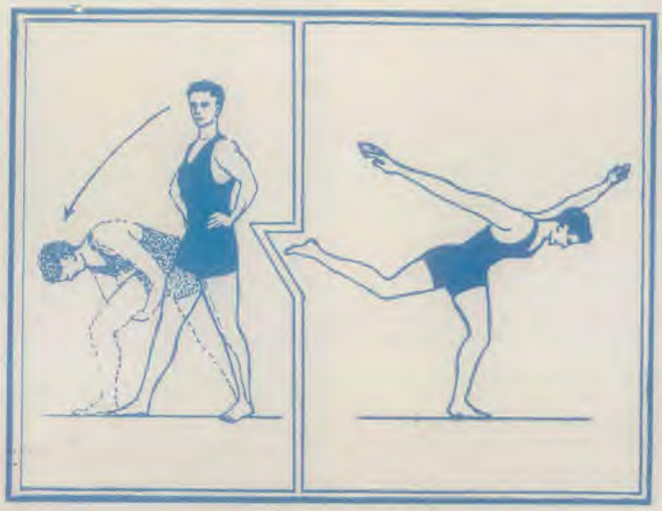
Miscellaneous

EXERCISES FOR BOYS AND GIRLS

(*Continued from p. 25.*)

legs, returning to the starting position. Sit tall and straight throughout this exercise. Do each exercise carefully and correctly, with a brief rest between exercises. The object is to develop strength, not speed.

EXERCISES TO MAINTAIN FLEXIBILITY. Two exercises in the standing position are recommended for



flexibility. In the first, stand with feet spread comfortably apart. Hands on hips. Take a long step diagonally to the right, keeping the left foot firmly in place. Tackle the right leg around the thigh with both arms encircling it. Return to the upright starting position and repeat with the left leg.

The next exercise requires a good sense of balance. Stand straight and tall. Stretch the left leg backward while the body is bent forward with arms outstretched sideways. Some youngsters like to call this "flying." The body weight is supported on the right foot. After returning to the starting position, use the opposite foot for support and repeat the exercise. The "flying" position should be held for five or ten seconds each time.

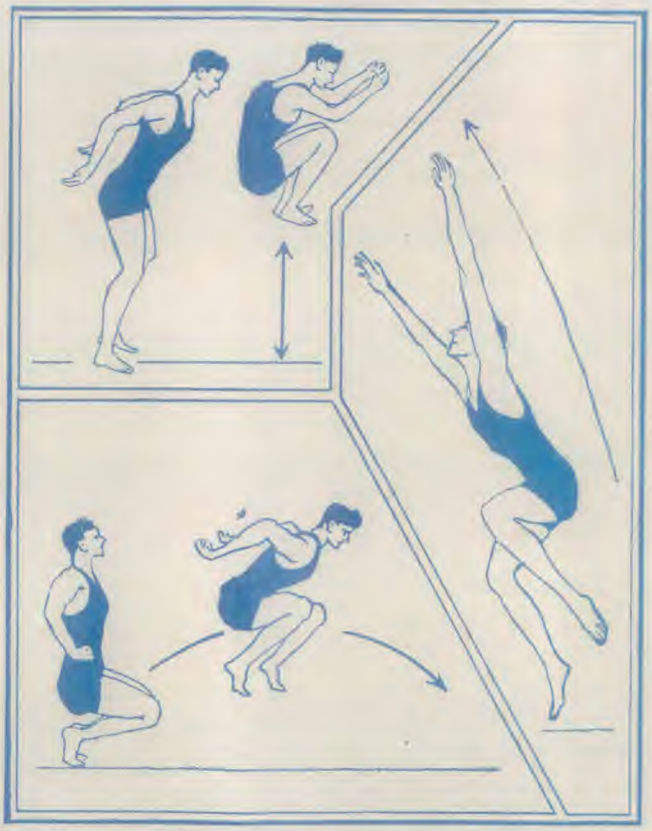
After this exercise take a brief rest lying on the floor. Then lie on your side with arms held above your head. Bring the upper arm and leg up, keeping both straight, and try to reach the toe. After doing one side several times, repeat with the other arm and leg, lying on the opposite side.

A good stretching exercise completes the set of exercises for flexibility. Two people sit facing each other, legs apart, soles of the feet against the soles of the partner's feet. Grasp hands, interlocking fingers. First one and then the other brings his body as near to the floor as possible, keeping the knees straight. The partner assists by pulling the exercising partner toward him. Keep legs straight and spread apart throughout the exercise. Take turns.

The squat thrust, one of the test motions for flexibility, is also recommended.

EXERCISES FOR AGILITY. The first exercise for developing agility is a simple exercise, often called running in place, or tortoise and hare. Standing in place, begin first by jogging slowly up and down. When the command "Hare" is given, double the tempo, with knees lifted high and arms swinging vigorously. When the command "Tortoise" is given, slow the tempo to an easy jogging again. This variation in tempo can be repeated several times.

Next try jumping and reaching. Stand with the arms stretched above the head, feet slightly apart. Bend deeply from the waist, keeping the arms outstretched. Bend the knees slightly. Swing the arms upward forcefully, straightening the body and leaping as high as possible as the body comes up. Land



in the starting position, ready to begin again.

Another exercise, called kangaroo hop, begins in a semisquatting position. Place the weight of the body on the balls of the feet, hands on hips. Jump as high and far forward as possible, keeping the balance and landing on the feet in a squatting position. Repeat several times.

A family exercise time each day can be fun for everyone. Why not try it? ***

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