

NEW DISCOVERIES



ALL OVER THE EARTH

How to Become HAPPY in OLD AGE

By Prof. W. Peabody Bartlett

IT has been said that happiness in old age is an art, but modern authorities on this subject declare it is nothing more or less than good common sense. Whether it is common sense or an art, the fact remains that it is possible for the average man and woman of advanced years to be far happier than the young and early middle-aged would believe.

In the first place, avoid treatment. That is, just because a person has reached old age it does not follow that he should be constantly treated as though he were sick. Old age is not sickness, nor is it really any form of sickness. It is perfectly natural.

When an elderly person is bed-ridden or unable to move more than totter about, then he is sick and unnatural and needs treatment, but for the average

Mild Mental and Physical ACTIVITY Will Give Old People TEN YEARS MORE OF LIFE

normal person of advanced years, a continual treatment is the worst thing possible as it is a constant reminder that he is "about done for."

Activity is one of the greatest of aids in making old people happy. Not the activity of the business man of thirty-five or the woodchopper or the woman with a big house and many children to care for, but activity enough to keep the body in gentle exercise quite a while each day, and, above all, to keep the mind active and on some pleasant thought.

In the countries where there is an even climate and where there are many flowers and singing birds and where old people are able to get out in the air and putter about little gardens or sit and knit in the sun, they live to a far greater age than in the countries where such environment is not possible.

In Southern France, in parts of Greece and in Eastern Europe, the per cent of people who live beyond the hundred mark is larger than elsewhere. Authorities on old age declare this is due more to the fact that the climate enables them to be out and about and gently active, than to the climate itself. In other words, if they sat idly about in those countries they would average to live no longer than in countries where the climate does not permit this.

The aged man or woman who does nothing but sit and think of the past day in and day out will soon die. The aged man or woman who keeps up an interest in life, who makes little visits, sees flashes of city life every few weeks, reads interesting things,



Idleness in Old Age Means Unhappiness and a Rapid Decline.



Activity in Old Age Means Many Years of Comfort and Happiness.

performs little tasks, such as making gardens or sewing or anything they are able to do, will live probably ten years longer than those who sit down and give themselves up to thinking, for their thoughts of the past can only constantly bring to their minds their advanced years.

The old people who keep busy and active, who keep interested in the world's work and in young people, live on until that time comes when it is as natural for them to be as ready to die as it is for the younger to be ready to go to sleep. A number of authorities on the debility of old age, known technically as "asthenia de senectute," have declared they had found quantities of aged people who were happy in their old age for perhaps a decade after most people would believe life to be a burden and that such people looked upon death, not as a horror, but as something perfectly natural and not at all to be dreaded, which is, apparently, the only natural viewpoint.

The aged should avoid radical changes, avoid overtaxing the strength, avoid inactivity and avoid overeating. Old people who are fond of animals are doubly blessed. Dogs and horses have proved great boons for the aged, and many a man or woman far advanced in years has really had life prolonged for many years through the interest they take in their dogs and horses, which has kept them sufficiently active and their minds from dwelling upon the fleeting days and the unpleasant things. Such care in

food and exercise and mental activity and interest in things about them will make old age more of a delightful dream than a stern reality.

Dr. Hugo Ribbert, of Bonn, Germany, is one of the many authorities in the matter of growing old gracefully and happily and staying young in mind during old age. "The chief preventative of old age," declares Dr. Ribbert, "is continuous activity, physical and mental. Keep going and you will stay young."

The retirement of a man who has been active all his life will result in his aging rapidly unless he still keeps something to give him exercise and to keep his mind occupied. Dr. Ribbert agrees that the old man need not continue to tie himself down to business and die in harness, nor need the old lady keep up all her household and social duties, but to suddenly retire and fall back, absolutely idle, is fatal, the doctor points out.

To consider the body as a machine that has gradually worn out in the course of years is not a fair view of the situation, for it should always be remembered that the body can be repaired to a great degree. Of course, youth cannot be actually renewed, but neither need the body be considered worthless, simply because it has attained advanced years. Keep the brain repaired by means of mild activity and keep the muscles from losing all their power by means of mild exercise.

By doing these things old age becomes a pleasure rather than a burden, and the body will continue to exercise its ability of self-renewal to a far greater extent than one would believe possible.

Why School Physicians Should Be More Than Good Doctors

THE highest authorities on medical inspection in schools are now agreed that the most skillful physician in the world will not necessarily make the best health officer for a school. Officials of the National Education Association are pointing out that it is not the school physician who can trace the largest number of defective children who is the most valuable.

What is needed more than anything these days is a health officer who will take just as much care in studying the surroundings of school children as in sorting out the little students with infectious diseases. A really skillful health officer will take far more pride in a long list of healthy children in the schools under his supervision than in a long list of defective children he has detected.

It is far more important to see that the children have proper ventilation during their studies; that they have plenty of light, a large enough playground, a sanitary basement to play in during rainy weather, pure drinking water in bubble fountains, because even with children the individual drinking cup is frequently loaned—it is far more important to

see to all these things than to try to trace out some child with an unusual defectiveness.

Picking out the sick children for teaching in separate classes is not going to help the normal children half so much as it will to see that their surroundings are just as they should be, for the normal children will soon get into the defective class unless such conditions are changed.

Therefore, the best physicians may not be best adapted for this work, as they may not have the faculty for ferreting out defects in conditions surrounding the children, all their energies running to the technical side of it. The health officer who makes it his duty to see that the school children are as properly cared for as to light, water, air and rest in the school as he would have his own children cared for in his home is the man who is going to bring about the very best results. Health officers whose ambition is to develop a healthy lot of school children, rather than dig up some obscure and rare disease, are the officers needed in these days, and every school committee in the country should see to it, declares the National Education Association, that such a physician is found.

By Dr. HERMAN WALSEMANN,

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WHILE it is true that the first movement of infants are reflexes, the development of muscular activity is dependent upon the co-operation of several factors: the strengthening of the muscles, hardening of the bones, impulses from within and without, the development of consciousness and motion.

The muscles grow stronger through normal nourishment and growth. The limbs become more active and display power. The strengthening of the bones is an important factor also, and heavy children are slower in walking as a natural consequence.

Impulses to activity are necessary if there is to be any progress. It is possible that a child would learn to walk instinctively, if let alone, and if it did not see any one walk, but it would follow much later. The child pushes at the floor with its feet, and first recognizes solidity and resistance in this way. It feels the inward impulse to get around, but this is helped greatly by outward suggestion. Imitation is at work, but the desire to reach some one or some thing helps most. The first steps are usually taken towards a mother's arms.

The will must help at every part of the step, and the interlocking of all the movements which go to make a single step are a considerable strain upon the mind as well as the bones and muscles of the child. The arousing of the desire, the sending out of the impulses along the nerves to the muscles, all this is by no means simple. Other senses are called into

When and How We LEARN TO WALK

play to make a step. The power of vision is called into play and especially the power of balancing, residing in the hitherto unused portion of the brain, must be cultivated. The eye and hand measure distances, and the balancing power helps the adjustment.

If the child wants to step over a threshold the eye has to help; the balancing power must do its share of adjusting the weight, and the step must be measured by muscular effort and eye co-operating. The slowness and uncertainty of the first steps are explained by this complicated process of adjustment of so many functions to this complex act.

Practice is therefore necessary, in order to facilitate the interaction of all the functions and sureness of procedure. Gradually walking becomes mechanical, and at last automatic. The single step is forgotten, and consciousness recognizes only progress towards an object.

Preparatory exercises are very necessary before actual walking begins. The child first sits (22d week), tries to stand in its mother's lap (28th week), lifts itself up when assisted and takes a step or two (42d week), stands by a chair and pushes it along (48th week), pushes itself over the floor (53d week), walks when held by one hand (54th week), stands without assistance (54d week), stands up of its own volition (55th week). Preyer gives the 457th day after birth as that upon which his child took its first free step. But the difference in physical and mental constitution of children causes a wide variety in the dates given above. Some exceptional children walk at nine months of age; more walk when a year old,

many when a year and a quarter old, like Preyer's child, but there are some who do not walk until later still. As a rule a child walks two months before it speaks. Understanding precedes walking. It is not wise to try to compel too early walking, as it is the common cause of crooked legs. It is better to wait until the child feels itself strong enough to stand and to walk. It is wise, too, for it to practice at first on a level floor, where the difficulties are least.

Walking brings great pleasure to children at first. This brings about excessive exercise of the legs, and the fright at a fall lasts only a short time. By practice the machine soon acts almost automatically, and little attention is required for the actual taking of steps. The progress is usually as follows: Standing alone (70th week), surer step without aid (71st week), running (85th week), dancing, at first without any thought of time (21st month), then in time to music (24th month), going up steps (30th month), throwing and jumping (34th month).

All these developments in walking mean far more to the child than the mere fact it has overcome the difficulties of locomotion. After the time it has learned to run, the ability of dancing is not so much a physical gain as a mental gain, showing that the child understands almost by nature the pleasure of rhythmic motion.

Then when the throwing and jumping period is reached the exercises that follow with a naturally healthy and playful child (and a little child is not normal unless playful) are greatly increased. From this time on the child begins climbing up on chairs, on boxes, over fences and then into small shrubs. But by this time he has so gained in muscular development that the few or many falls that follow his daring in climbing what are to him extremely high places will not really hurt him much.

Practicing MEDICINE BY WIRELESS Telegraph

ON the Isle of Strife, which marks the furthestmost point of land at dangerous Cape Hatteras, lives a doctor by the name of Sutton, who has an independent practice. There is nothing remarkable in this, for the island is large enough to support him, and many doctors have island practices, but Dr. Sutton is noted because there is a large share of his "doctoring" that is actually done by wireless.

Ships are constantly passing Cape Hatteras, and people are constantly getting sick, not with sea sickness, but more dangerous illnesses, aboard these ships. There are many storm tossed ships passing here also, and many a sailor is injured in the storm.

Because of all this, if the sufferers are really in a bad way, their symptoms are flashed to the wireless station from the ship. Dr. Sutton studies these symptoms and then, after making a diagnosis as well as possible, prescribes. His prescription, or instructions, are flashed back to the ship, and with such good results that the doctor has become famous.

Many a captain of a sailing vessel, barge or tramp steamer, such small ships as do not carry their own medical man, who has a sick man aboard and is in the vicinity of Cape Hatteras, will say, "I'll get Dr. Sutton for you," and he promptly writes out the facts about the sick man and has this sent by wireless to the doctor, who invariably prescribes, flashing this back to the captain, who sees that out of the ship's medicine chest the things needed are administered.

The Isle of Strife is 100 miles long and from 2 to 6

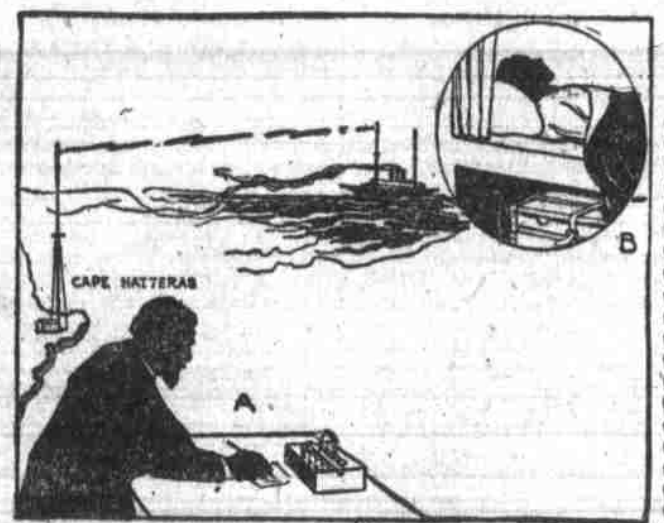
miles wide, with many fertile valleys, which support about 300 people. Most of these are fishermen, life savers and sailors. Dr. Sutton is 150 miles from a hospital, and 100 miles from a city, and naturally he is the medical authority for the entire island. This is interesting, but that he does a great share of his medical work by wireless, adds greatly to the interest, and also gives hint of another advantage of the wireless and another means of giving medical aid.

Ships that are far out at sea without a medical man aboard wire for help, and the doctor has to go to the station and prescribe for the symptoms as they are conveyed over the wireless telegraph.

Ships out five, six and seven hundred miles not infrequently call for help. Fruit steamers, coasters of all kinds going up and down needing medical assistance call up the station. In one instance a captain was knocked down and received a fractured leg. The operator called and received instructions how to treat it, and when the ship was brought into New York Harbor the condition of the injured captain was very favorable.

The following is an instance of treatment by wireless: The steamer Esparta at sea off Cape Hatteras March 16, 1912. "Baby thirteen months old, dysentery. Has a temperature. Losing weight and very ill. Have been feeding barley water. What shall we do?" The doctor replied at once. The next morning, although the ship was many miles farther away, a message was received that the baby was better and improving.

While many ships carry medicine chests, not infrequently the officers become demoralized in their efforts to administer drugs by printed instructions, but the doctor at Hatteras is ever ready to give proper advice by wireless. It may be hundreds of miles away, but his words of cheer and good counsel come through the roaring winds and dense fogs of this stormy region.



The Captain Sends Symptoms to the Doctor (A), Who Promptly Prescribes for the Sick Man Aboard the Ship (B), Hundreds of Miles Away, by Wireless.

Why Illness During Teething DEMANDS A DOCTOR

A RECENT report from Berlin, which showed that of the certificates of death of children three in a thousand gave "teething" as the cause, has given rise to several articles pointing out that teething can almost never be considered as a factor of disease. Nothing is more common, however, for a mother to ascribe to "teething" all sorts of minor ailments in the child, and many an infant has died because the parents have been satisfied to think that a child ought to be ailing at the time of getting its first teeth, when, as a matter of fact, the true reasons of the child's illnesses were deep-seated and serious.

It is as absurd, a well-known New York doctor writes, to state that disease is due to growing teeth as it is to declare that disease comes because of the growing of the hair or of the nails. The teeth are, indeed, as is well known, not parts of the bony structure, but take their origin as ridges of hardened skin. They are not deeply allied to important physiological organs and cannot be given the blame for many of the childish illnesses of which they have been accused. Even con-

vulsions, so often declared to be the result of teething, are now known to be due to profounder changes which are taking place in the organism of the child at the same time that the dentition process is continuing.

There are several forms of skin eruption, different from the various forms of rash seen in the infectious diseases which are frequently ascribed to teething processes, but a careful study shows that these are due to tissue changes in the usual processes of growth, so that it is actually true that the child "grows out of them." They have, however, no relation to teething other than that they occur at the same time. One of the evidences of the fact that the teeth are no longer regarded as the seat of many infantile disorders is that the old practice of lancing the gums of a teething child when it was suffering from some internal disorder largely has been given up because it was found that it did not have any definite result. The real danger of the superstition lies in the fact that many times a baby's life would be spared if a doctor were called in to examine a child for symptoms which some too-confident neighbor declares to be "just teething, my dear; my little John was often just that way!"

"COFFEE-TEA" as a Refreshing Beverage

"COFFEE-TEA" sounds as though it might be some concoction made from both tea and coffee, but in reality there is no tea in it. Nor are there any coffee berries in it. It is made solely from the leaves of the coffee bush.

As everyone knows, tea is made from the leaves of the tea plant, and coffee is from the ground berries of the coffee plant. But the fact that a beverage of many merits is made from steeping these coffee leaves just as tea leaves are steeped, led to the name of "coffee-tea."

This drink may never become popular, but there are many advantages claimed for it. In the first place, it is said to be far less harmful than either tea or coffee. It contains scarcely any caffeine, which is said to be that portion of coffee that lessens efficiency if

taken in too great quantities. At the same time the coffee leaves contain nearly as much tannin as real tea, and far less tannin, the tannin being the objectionable part of tea.

Coffee-tea is made the same as tea. The dried leaves resemble tea to a remarkable degree. An infusion of the leaves is made just as with tea, and a notably aromatic beverage results. It must be admitted that it is bitter, far more bitter than either strong coffee or strong tea, but people who have tried it for a while claim they get used to it and like it better than either straight tea or coffee.

It has been suggested that this coffee-tea, while by no means quite so agreeable to the taste educated by genuine tea and coffee to those not used to it, may become an important article of diet, since it is really wonderfully refreshing and restorative in its effect, and it is also believed that people who are unable to drink ordinary tea or coffee might get used to it.

How We May "TASTE" ELECTRICITY

IN some forms electricity is invisible, while in others it may be seen. The lightning flash and the electric light are easily seen, but the current itself is really invisible to the eye.

The sense of feeling can detect the presence of the mysterious element, and the sense of hearing may detect it, and the sense of smell has been known to locate the presence of the wonderful power, but it has just recently been discovered that we may taste electricity.

Metals of an opposite nature will, when properly connected, throw off a small current of electricity, and this may be tasted by taking a piece of bright, clean tin about the size of a silver dollar, and placing either above the tongue or beneath it, with a silver dollar on the opposite side. Keep the outer edges of the silver and tin apart for a moment, and see if you can detect any taste.

Then bring the outer edges of the metals together with one above and the other beneath the tongue, and instantly there will be a sour taste in the mouth. This is actually tasting the electric current that is produced by the contact of the two metals, and which in making the circuit is passing through the tongue which is very sensitive.

Blaming TOBACCO for Making DUNCES

OVER ninety per cent of all boys who fail in grammar and high schools are smokers, according to Professor M. V. O'Shea, of the University of Wisconsin, and he further asserts that the tobacco evil is the most serious one that public schools have to contend with.

He does not believe that most boys smoke because they like tobacco, but because their schoolfellows smoke. It is a social thing with the boys and by smoking the average boy thinks he is one of the "crowd," but an "outsider" if he does not smoke. Unruly boys, says Professor O'Shea, are almost always addicted to the cigarette habit, and he declares that smoking robs the pupils of their docility. Records kept of the students who were not addicted to the smoking habit when they

entered the high school but who acquired it later, show that not only did these pupils become harder to manage, but the quality of their school work also declined greatly.

The statement of a number of high school principals to the effect that from fifty to eighty per cent of high school boys are now using cigarettes, shows what a hold the smoking evil has gained on them. "It is an interesting fact," says Professor O'Shea, "that the strongest sentiment against smoking has arisen in communities in which raising tobacco is the principal industry. Tobacco men do not want boys in their own communities to smoke, while in a number of places in Wisconsin the records show that this smoking by young boys lessens their mentality and makes more or less dunces of them. Many organizations have taken an active stand against smoking by school children."