

HEALTH AND STRENGTH.

BY

MARGARET WARNER MORLEY.

"Nor love, nor honor, wealth nor pow'r,
Can give the heart a cheerful hour
When health is lost. But timely wise;
With health all taste of pleasure flies."
Gay's Fables, Pt. I, Fable 31.

WHEN his form is sufficiently developed, man, like other mammals, is born. This does not mean that his cells have accomplished their work: Far from it—his cells are as busy as ever. They fasten upon the milk he drinks and form it into themselves; the muscle cells turn it into muscle, the bone cells into bone, the brain cells into brain. Later, when he eats solid food, the cells seize upon that. His blood carries his food in a dissolved state, dissolved by the work of certain cells, all over his body. It flows everywhere, touching every spot; and as it flows past them the cells seize upon whatever they want, to make new tissue or replace that which is worn out.

Thus the body is dependent upon the cells as long as it lives. When the cells cease their work the body is dead. The cells are dependent upon the food they get for the kind of work they can do. At first milk supplies all that is needful; then comes a more varied diet,—vegetables, fruits, grains, and meats being taxed to supply the never-ceasing cry of the cells for food. Nerve cells in the mouth and nose test this food and decide upon its merit.

But these nerve cells are better pleased with some things than others; the nerve of taste rejoices in sugar and certain combinations of flour and butter called pastry, and certain stimulating spices. To a limited extent such food is proper; but because it "tastes good" the ignorant feeder eats it to the exclusion of other foods which are more digestible,—and finally the cells of the stomach, overworked and weak, refuse to dispose of the indigestible stuff. Although warned by the uncomfortable feeling caused by the rebellious cells, the victim sometimes continues to transgress.

What is the result? The cells refuse to do their work; they grow sullen and irritable; and the food in an undigested state is turned out of the stomach. The blood cannot get the materials that it needs from this ill-prepared food, and of course the cells cannot get what they need from the blood. Some of the cells starve to death; others do their best, but the tissue they build is weak and flabby. Others again, not able to build what they wish, take the poor material and build another kind of tissue, which being unnatural, does all sorts of mis-

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chief in the body. All of the cells are discontented and sick, and allow the germs of foul diseases to lodge in their midst, if such germs appear and ask admission. The brain cells, being poorly nourished, are irritable, and cause all sorts of suffering in the way of headache and nervousness to the victim. The skin cells do not trouble to build up good skin; but when the old falls off, there is a bare and sore spot underneath.

Everything seems out of order, and the victim of this careless treatment of the cells is told by the doctor that he has dyspepsia; and he thinks dyspepsia is a stomach trouble, when it is really the starvation of the cells all over his body. The cells, like the people they are a part of, form habits. When the stomach cells have formed a habit of not performing the work of digestion, this habit grows upon them; so while the young person may not suffer seriously from a careless habit of eating, he is laying up terrible trouble for future years.

The use of tobacco has a curious effect upon the cells of the body. The nerve cells feel it first. When tobacco is first smoked to excess the cells resent it with all their might. The stomach cells often become violent and force the contents of the stomach out through the mouth, but after a while the cells become demoralized; the overdoses of tobacco deaden them and thus relieve the discomfort at first caused. This is probably the reason they seem to crave it. They want the thing that poisoned them to poison them more, and so deaden their discomfort.

Tobacco is very irritating to some cells, while it is soothing, or deadening, to others; and so, when used to excess, it sometimes causes incurable ulcers in throat and mouth. The cells, finding that they cannot make good mucous membrane in the presence of tobacco poison, make pus cells instead. The senses grow less acute under the influence of tobacco, until those of taste and smell are dull, and the victim can no longer enjoy the odor of the buttercups and daisies when he walks in the fields, and probably comes to prefer the stale tobacco odor which he constantly carries about with him to anything the sweet fields can offer.

The cells of the body are very sympathetic, as we thus see. Ready to do good work if properly treated, they are very apt to unite against oppression if ill-treated; so that harm done to even a few cells will often affect the whole body. Of all the abuses to which the cells are subjected none is more harmful than the habit some people contract of poisoning them with alcohol. At first the alcohol stimulates certain nerve cells, and this causes a feeling of pleasure. But if the alcohol has been taken in excess the pleasurable feeling soon passes, and then the cells are weak and weary. Whenever they are thus over-excited an abnormal action is set up. Like the cells irritated by tobacco, those poisoned by alcohol crave more of the poison to make them forget their discomfort; so the victim is led on by slow but fatal steps until his cells are thoroughly demoralized and will do nothing right. The

stomach cells refuse to act, the food is not properly digested, and after a time the inside of the stomach becomes covered with sores. The cells that ought to make liver go to making fat instead. In fact, the cells all over the body seem to have lost all moral rectitude, and instead of building up sound tissue, take a drunken delight in converting the alcohol-saturated blood that comes to them into all sorts of abnormal tissue; until finally the victim dies of some terrible disease with which his wine or beer drinking had apparently nothing to do, although it was really at the bottom of the whole trouble.

THE NECESSITY OF GAMES.

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GAMES must be an integral part of every system of physical training. No other form of gymnastics is so recreative in its effects, and none has such lasting power over young and old. Why this is, has been a matter of inquiry for years, and many psychologists have been led to investigate why this form of bodily exercise has such great fascination. In the "Play of Man" Groos expresses the view that by means of play the young of both animals and man develop those physical and mental powers which they need later in life. Games thus serve for the preservation of the individual and of the species. The instinct of self-preservation thus would be the power which excites us to play, therefore an animal which did not play during its youth would be sure to be underdeveloped and lost in the life-struggle.

Stanley Hall opposes this idea. He states that true play never practises movements because they are to be of use later in life. He says that plays and games are the expressions of the motor habits and spirit of the past of the race. They are rehearsals of those bodily and mental activities which in the early life of man were necessary for self-preservation. The work executed in play was necessary to the life of our earliest ancestors. Now, if function makes or modifies growth, that is, if we have our present shapes because our ancestors were forced to do certain things, it will be seen that even many of the apparently aimless games of young children have a deep meaning. According to this view these games exercise some rudimentary function which, although disappearing in later life, must be exercised at this stage of the child's development, in order that certain organs of the child may develop normally. These plays are adapted to their motor needs. It is because they develop the motor capacities, impulses, and forms of our past, says Hall, that plays and games