

flowers—vistas of forget-me-nots, speedwells, and wild hyacinths that cover the green undergrowth like patches of fallen sky. The gorse looks as if Midas had been flinging at random coins of gold over its prickly bushes. The bosoms of the blithe birds seem bursting with melody.

IV.

THE foliage of full summer in the fertile valley. The twilight glades of the wooded banks are now clothed with the rich panoply of July. The trees wear their richest liveries. The drowsy heat drives you to the margin of the river, that seems to send its current of crystal coolness through the tired brain to refresh the weary life. A liquid looking-glass, the water reflects the hanging greenery on its banks, save where the surface is hidden by water-lilies, the white stars of the flowers shining here and there among the broad green floating leaves. The water-ouzel, or "dipper," curtsying on a mossy rock, displays his white bib and tucker, and then dives into the river and disappears. A rat swims across the stream with a young one in its mouth. It is, no doubt, a mother teaching her offspring the art of natation. A kingfisher shoots like a blue arrow across a mimic cascade, wild and musical, as the water tumbles over the lichened boulders into a deep pool that mirrors the sky and the moving white clouds. The river is haunted with trout. It is a classic stream. Izaak Walton and Charles Cotton fished in its running waters more than two hundred years ago. But these fine speckled fish are full of endurance and daring, and defy the fly-fisherman. Local satire describes the trout and grayling of this valley as having passed the "sixth standard," and being able to tell at a glance from what Man-

chester or Liverpool fishing-tackle shops the gay flies and gossamer-like gut have been purchased. Instead of the angler decoying the trout, it is the trout that decoy the angler. The water is so pellucid that the fish have the sport, and not the fisherman. One "Judicious Hooker" has suggested that, in fishing this wide-awake little river, "a visible fly attached to an invisible hook, on an invisible line, should be thrown with an invisible rod by an invisible piscator." But, after all, fishing for the sake of filling your creel is only a secondary consideration. The river is the objective point that transports the rodster from the mercenary, struggling, unsympathetic world into the country, to be taught the lore which Nature brings. It is an excuse to get by the side of the soliloquising stream. It takes him from the sordid surroundings and poisoned air of the town into a land of green beauty, to the sound of wild songsters, and the smell of opening flowers; to the flow of the responsive river, the flash of the kingfisher, the flight of the swallow, the flutter of wings and leaves. For him is the music of merle and mavis, the perfume of meadow-sweet and snowy elder-tree, and the soothing wash-wash of the eloquent water.

While the waves splash pleasantly, and the wild birds build in the boughs by the river, and we "read Nature like the manuscript of Heaven, and call the flowers its poetry," you may listen to the mysterious talk of the Voices of the Valley. What is the vibrating refrain in the touching old German song that Madcap Violet so tenderly recalled?—

"Far away—in the beautiful meadows—is the house of my home. Many a time I went out from it into the valley—O you beautiful valley—I greet you a thousand times—Farewell—farewell!"

EDWARD BRADBURY.

SOMETHING MORE THAN A SYMPTOM.

BY A FAMILY DOCTOR.



HERE is a scene from life, reader—from my own life, in fact. The time is eighteen hundred and fifty something, and I am standing in a row of about a dozen other not-too-happy urchins, being examined on the work of the week, for it is Saturday fore-

noon. The school is one of the best in the far north of Scotland, and the teacher is admitted by all parents to be a "tickler," for it is generally believed that the depths of his erudition are unfathomable. We boys consider him a "tickler," too, but one of a different sort. The words of wisdom, "Spare the rod and spoil the child," he construes in a painfully literal sense. The meaning he attaches to the verb "to live"—that is, as far as little boys are concerned—is "to be and

to do and to suffer," and he exemplifies it in the persons of his pupils every day in the week. He has a "pointer" to probe us in the ribs, a thin rattan cane for light work, and a piece of old bridle, with two fingers on it, to "pandé" us on the open palms—a dire and dreadful punishment in frosty weather, when the hands are blue with cold—and he has also his fist with which to box the ear. Let me take this opportunity of telling parents that boxing children on the ears has often led to deafness, and to disease of the brain, which has in time ended fatally.

You may guess how I loved that teacher! I used to long for some miracle of the Jack-and-Beanstalk order to take place. "Oh!" I used to think, "if some good fairy would come behind me, and touch me with her wand, so that I might grow up into a man with a sudden bound! I should not want to be a man for more than five minutes," I thought.

Five minutes would have been quite long enough for that dominie's comfort.

But here we are at our lesson of recapitulation.

"Now, little boy," he says to me, "tell me smartly and quickly the several meanings of the words 'entomology,' 'etymology,' and 'etiology.'"

I begin blundering about "beetles," get mixed up in "birds," and end by getting punched all the way to the bottom of the class.

But perhaps the method of my earlier education may have had something to do with my unwillingness at the present time to bother my readers with anything that might be called "dry logic." If as a tiny lad I was apt in my own mind to connect the words "physical science" with the administration of brimstone and treacle, as a man I am unlikely to obtrude on others something perhaps not half so sweet—the science of physiology.

But, stay, I can make a little of it go quite a long way, and as that little will tend to make my subject more easily and perfectly understood, it can hardly be objected to.

What, then, I want to point out to some, and recall to the memory of others, is some facts concerning the anatomical construction of the digestive canal, beginning with the pylorus or lower outlet of the stomach.

It is generally believed—by the uninitiated public, I mean—that digestion is practically concluded when the food leaves the stomach; but this is very far indeed from being the case, for the intestines have their work to do, the chyle or pap formed in the upper receptacle has to receive the secretions of the liver and other important organs, has to be turned into chyme, and that chyme has to be absorbed by a wonderful network of special vessels and carried away upwards to the thoracic duct, which presently empties it into the blood. Just one lesson of importance may be learned from this: it is most essential for health and life that, even after it has cleared itself of its nutritious contents, the stomach should be allowed to rest for a time, empty, or as empty as it ever is. And this for two reasons—first, that the organ itself may recuperate; and, secondly, to give the lower and longer portion of the digestive canal fair play. For if food is thrown into the stomach immediately after it is empty, a large amount of nerve or working power is abstracted from the *duodenum*, *jejunum*, *ilium*, &c., and they must, therefore, be hampered in their efforts to do their duty.

And this very "sin"—I can call it by no milder term—of eating too often, is one of the principal causes of the complaint I devote this paper to, and to which I may be permitted to give the name of "constringency," a name that at all events is quite as expressive as any other.

But with regard to the construction of that portion of the digestive economy more immediately at fault in those suffering from this complaint, all that I desire you to remember, and that you must remember, is this: virtually speaking, the canal is composed of three coats, *i.e.*, it is like three tubes one inside the other. The lining coat is a mucous membrane covered

wholly with exuding outlets, and to a large extent also with a protruding pile, so to speak, each *villus* of which, waving free and supplied with nerve, vein, artery, and absorbent apparatus, drinks in, as it were, the nutritious portion of the food. The second coat is the muscular, the length of each muscular fibre going round the canal, not up and down it; do not forget that. The third coat is a fibrous one, which, for practical purposes, I may merely describe to the lay reader as the one that gives firmness to the whole canal.

Well, now, the very mention of mucous membrane as the lining of the digestive canal implies the fact of exudation, and it is this exudation which tends to keep the contents moist. Without this supply of moisture they could neither be forced onwards nor induced to part with their nutritive portion for the supply of the blood. You see, then, how all-important this coat is.

As to the action of the muscular part of the tube, it is called vermicular. If the reader will kindly close his fist as he scans these lines, and keep tightening finger after finger till he feels the nail of each pressing against the palm, he has a homely, though pretty accurate, example of the action of the muscular coat in question.

All, then, you have to bear in mind is the exuding or mucous membrane; the pile of free-floating *villi* which absorb nutrition (suck it up, you may say, and pass it on behind to vessels that carry it away to the blood); and the muscular coat, with its peculiar, worm-like onward-movement action.

So long as these are all in working order, everything is all right; and if good food, in not too great abundance, and all unpoisoned by stimulants (either in the form of too-hot sauces or acid-producing liquors), is eaten, good blood is bound to be made, and health and happiness are the almost certain results. But a hitch in the working of either coat spoils all, and, so long as it exists, the individual owner thereof is simply miserable; he but lives, as I did at school, "to be and to do and to suffer."

And now a few words as to the ordinary causes of constringency or torpor of the digestive canal; and these will lead, naturally enough, to the suggestion of remedies for its removal.

From what I have already said, it must be evident that the cause of the trouble may be confined to any one coat, but of course all three may be implicated, and generally are. Take the mucous or lining coat first, and we find that dryness, or rather a lessened degree of moisture, in this will interfere very much with the later stages of the digestive process. One common cause of such a state is the abuse of heating foods and stimulants. This is a direct cause, for fever—in a slight degree—of the system is engendered, and the lining membrane of the whole body, including even the air-passages, is dried to some extent. Too sedentary habits form another cause. Your easy-minded, lazy folks, however, who sit for sake of sitting, are not so much troubled with the complaint as the work-a-day man or woman who has to use the brain. In all cases of brain disorder of an exciting

character, we find the system is much bound ; and to a lesser but a very uncomfortable degree study has the same effect. So has worry of mind (*i.e.*, *brain*, in this case).

A cause of dryness in the mucous membrane but seldom thought of is hard water used for drinking or cooking purposes. See to that at once, if you are a sufferer. Better send for water for your tea, coffee, or soup, to a well miles away than endure misery that may lead to a total break-up of the system.

Excessive tea and coffee drinking also tends to dry the system. Many other causes lead to the same, especially among the weaker sex.

So much for the mucous membrane. Now for the muscular. It is weakness alone that this will suffer from, and want of exercise is an all-pervading cause. All the muscles of the body are strengthened by exercise, which tends to the proper flow of all the secretions of great glands, such as the liver, pancreas, and kidney ; determines the elimination of poisons from the blood, such as bile and urea ; and keeps the skin in splendid working order. But the reader will readily perceive that if it be the mucous coat that is in fault, exercise, though it may assist Nature, will not cure the complaint as long as any of the causes above mentioned are allowed to hold sway.

The muscular coat is weakened from the want of a sufficiency of good and easily-digested food, or from over-eating. Again, if the mucous coat is long out of order, the muscular has extra work and strain in forcing onwards the over-dry contents of the canal.

For the same reasons, too, the fibrous coat will be weakened, and, as too often happens in people advanced in years, it gets stretched and to some extent useless.

I may add that if too much of green vegetables is taken, as is sometimes the case, flatulence and fermentation take place, and distension of the canal, which tends greatly to weaken both the muscular and fibrous coats.

And this leads me to add still another cause of torpor—namely, the abuse of aperient pills and aperient medicines generally. These may be needed occasionally, but to *keep on* taking them is certain to lead to the most distressing debility of the digestive canal,

which is known to end at times in complete obstruction, and this seldom fails to end all.

The primary symptoms of constringency or torpor of the digestive canal are well known (the very names I have given the complaint are sufficient to describe them), but the secondary symptoms are not so easily distinguished ; and, indeed, the case is often treated as if the torpor were a mere symptom, when it is something considerably more. The patient after a time becomes torpid himself, life loses all charm, he suffers from headaches or fulness in the head, is drowsy and stupid after meals, sleeps heavily at night without being over-much refreshed, has cold feet and maybe hands as well, is nervous, gloomy, and generally dyspeptic.

Digestion is performed very slowly, and he is apt to peptonise himself, if I may so call it, under the impression that the gastric and pancreatic juices are not in sufficient force. One week he takes tonics, the next diuretics or aperients. In a word, he is all in a muddle, and knows it, but cannot help himself.

Now the cure of all this trouble may be described in a few words. The sufferer must have—to the greatest extent possible—permanent and complete change. He must remodel his method of living ; lay down strict laws for himself, and abide by them for some time to come.

Stimulants, sauces—even tea and coffee, except in most moderate quantities—must be avoided.

He must get up in the morning when he wakes, nor sleep on too soft a bed. Hard walking exercise, or plenty of cycling, is part of the cure. He must encourage Nature by regularity in everything.

A glass of cold water before breakfast should be taken with the juice of half a lemon in it.

Foods such as bacon for breakfast, oatmeal or groats, and a moderate amount of green vegetables with dinner, all do good. Fruit for breakfast and dinner does good.

Medicine : I do not intend to prescribe drugs. Rational hygienic cures are before medicinal. The cure, indeed, lies in the sufferer's own hands. And, in conclusion, let me earnestly impress on all the fact that long-continued torpor is highly dangerous, and truly somewhat more than a symptom, for, if neglected, it may lead to a breaking-up of the constitution.

MY SULLEN CHILD

A LEAF OUT OF A YOUNG MOTHER'S JOURNAL.



T is not easy to keep up with the children in a journal. You are ill, or they are ill ; and, behold, many blank pages ! I find many scattered notices of Lucy in the last two or three volumes of my book, and I always write of her, I find, as "poor Lucy." Now, I wonder why ? The child is certainly neither unhealthy nor unhappy—at least, not with any reason ; but again and again I find this sort of entry :

"Lucy looked so little pleased at the children's 'garden party,' that I said she should stay within and play with her dolls."

"Lucy displeased with her porridge ; says nothing, but black looks all day."

"Hugh bumped against his sister : by accident, I truly believe, but Lucy can't get over it ; speaks to no one, and looks as if under a cloud."

Well, I need not go on ; the fact is, the child is