

time. Local compresses, hot or cold, as is most agreeable, may be used for local pains.

There may be other applications in each particular case that would be found useful, but the plan I have given will generally be sufficient; and when not the judgment of the practitioner must supply what is wanting, as I cannot, in one short article, give full prescriptions for every case. Do not neglect to keep the sick room well ventilated, and have the clothes frequently changed. Let no food be eaten for several days, and very little until the fever is broken up, let it continue long as it may; and a rigid diet should be kept up for several weeks after recovery, or relapse may be brought on. No grease or animal food should be used.

By following out this plan vigorously and perseveringly, without turning aside to listen to any number of benevolent individuals, who will be volunteering their advice, and recommending a hundred remedies, you will seldom fail to restore your patient to health. Occasionally death may, and very probably will occur, under this, as well as other modes of treatment, though I have never known of such an occurrence. But the proposition of deaths cannot be near so great as under the drug treatment, and there will also be less suffering and no poisonous drugs in the system, to engender future disease and life-long poisons in the victim, to be brought forth anew in his or her posterity.

Those who wish further information on the subject of treating fevers, will find some excellent recommendations in Dr. Trall's Encyclopaedia, which I would advise every one to procure.

In many places where these fevers abound, there are Water Cure physicians, and those who abhor drug poisons, and will treat themselves rather than employ a physician who gives them, this article is prepared. I make no apology for the unscientific style in which it is written.

I should have stated that there should be no discouragement if health is not restored in a day or two. Often a week will be sufficient, sometimes less, generally it will take more. But should it take two or three weeks, it will be far better than to stop it with calomel, and arsenic, and quinine, or either of them to appear again in a week or two, or six months, or a year; and thus lay the foundation for a life of future disease and suffering.

The treatment should be kept up for some time after disease is arrested, or it may return, particularly when the patient is exposed to the causes that produced it. But as the water treatment is a purifying process, instead of a corrupting one, only good can result by its continuance, so long as there is danger of recurrence of the disease.

ANATOMY AND PHYSIOLOGY OF DIGESTION.

BY A. P. DUTCHER, M. D.

THE FUNCTION OF DIGESTION.—Having presented a brief outline of the alimentary canal, and the subsidiary organs, we will give a short sketch of the functions of digestion. The food, after being masticated and impregnated with saliva in the mouth, is conveyed by the oesophagus into the stomach, here it is subjected to the action of the gastric juice, by which it is gradually converted into a soft grayish fluid, called *chyme*. The *chyme*, as fast as it is formed, is conveyed through the pylorus into the duodenum. It there meets with the bile from the liver, and the juice from the pancreas. By the action of these two fluids, the *chyme* is changed into two distinct portions—a milk-white fluid named *chyle*, and a thick yellow residue. The *chyle* is then taken up by absorbent vessels, called *lacteals*, or milk-bearers, which are extensively ramified on the inner membrane of the intestines. From the *lacteals*, the *chyle* is carried through the mesenteric glands into the *thoracic duct*, which empties itself into the jugular vein, close behind the collar bone, and thus the nutrient matters separated from the food by the digestive process become mingled with the blood, and after being submitted to the action of respiration, are rendered fit for nourishing and supplying the wastes of the body. The yellow residue, passing on through the intestines, is

ultimately ejected *per annum* from the system. Thus, in the process of digestion, five different changes are observed; 1st, The chewing and admixture of the saliva with the food; this process is called *mastication*. 2d, The change through which the food passes into the stomach by its muscular contractions, and the secretion from the gastric glands; this is called *chymification*. 3rd, The conversion of the pulpy *chyme*, by the agency of the bile and pancreatic secretion, into a fluid called *chyle*; this is *chylification*. 4th, The absorption of the *chyle* by the lacteals, and its transfer through them and the thoracic duct, into the jugular vein. 5th, The separation and excretion of the residue.

TIZORY OF DIGESTION.—If we begin to review the theories, which have been advanced at different periods of the world, to account for the changes through which aliment passes in the stomach, we shall find some of the most fanciful vagaries that have ever been produced by the mind of man. Although apparently simple in its nature, yet it has been a most prolific source of speculation and philosophical disputation.

First came the theory of that grand old father of medicine, Hippocrates, which supposed the change was produced in the aliment by what is termed *concoction*, a term derived from the change observed to take place in substances when they have been exposed to a certain degree of temperature in a close vessel. This doctrine was generally received, until the middle of the seventeenth century, when it was overthrown by the chemical sect of philosophers who established on its ruins, the hypothesis of a peculiar fermentation, by means of which the aliment was macerated, dissolved and precipitated. This system did not retain its ground long, but was replaced by another much less reasonable—the doctrine of *trituration*, or grinding down of the aliment by the contraction of the stomach. Following this theory, came the doctrine of *chemical solution* which is nearly allied to that of fermentation. This supposed the action of the gastric juice to be similar to that of a chemical solvent, and it appears to come still nearer the truth than any that had preceded it, but it is encumbered with difficulties that are insurmountable. The most recent theory, however, is the *nervous*. It makes the function of digestion depend exclusively, and

nervous system. We have thus presented a brief outline of the various theories which have been broached, to account for this interesting and wonderful process, no one of which is free from objection, or alone satisfactory to the physiologist. The researches of modern science have, however, enabled us to refute these exclusive dogmas, and put the stamp of improbability, at least, upon many of their pretensions. We look now to a combination of causes for the digestive function. Chemical, mechanical, and nervous forces each bear an important part in this complicated operation. And we believe that the celebrated John Hunter was as near right as any of our modern physiologists, when he affirmed that the function of digestion is a peculiar one; that its nature is not to be likened to that of any other known operation, and that to use his own expressive language, "to account for digestion some have made the stomach a mill, some would have it to be a stewing pot, and some a brewing trough; yet, all the while, one would have thought that it must have been very evident that the stomach was neither a mill, nor a stewing-pot, nor a brewing trough, nor anything but a stomach."

To be continued.

PHYSIOLOGICAL LAW.

BY T. P. C.

I am now twenty one years of age, with poor strength of system, and great nervous apparatus. My father, a tall man, was exceedingly slim, so much that the tailor pronounced him the thinnest man he had ever measured.—At an early age, he married a stout, healthy woman, by whom he had ten sons, seven of whom are now living, and all of whom are larger and more robust than their father. But

his second marriage was to a small, delicate woman, with feeble vitality, and a very great predominance of the nervous temperament. After the birth of four children by this connection, he died aged 52, of pulmonary consumption. But see the consequence of such a violation of physiological law. The youngest died when an infant. The only daughter fell when blighted by consumption just as she had stepped upon the threshold of womanhood.—The oldest son died from the same disease immediately after reaching manhood. And myself, the only surviving one, at this early age, am now suffering from all the symptoms of pulmonary consumption, pronounced by my friends past all recovery. An affectionate mother, too, who is almost heart broken at the desolation that has already fallen upon her family, awaits in fearful anxiety the issue of the attack upon her only son, and should it prove fatal, she will probably sink into her grave, crushed by a stroke more afflictive than any she has yet experienced.

Miscellaneous.

FIRMNESS.

BY PHEBE CARBY.

DEFIANCE.

Well, let him go, and let him stay—
I do not mean to do;
I guess he'll find that I can live,
Without him, if I try.
He thought to frighten me with frowns
So terrible and black.
He'll stay away a thousand years
Before I ask him back.

He said that I had acted wrong,
As I foolishly beside;
I won't forget him after that—
I wouldn't if I died.
If I was wrong what right had he
To be so cross with me?
I know I'm not an angel quite—
I don't pretend to be.

He had another sweetheart once,
And now when we fall out,
He always says she was not cross,
And that she didn't pout!
It is enough to vex a saint—
It's more than I can bear;
I wish that girl of his was—
Well, I don't care where.

JEALOUS.

He thinks that she was pretty, too—
Was beautiful as good;
I wonder if she'd get him back,
Again, now, if she could?
I know she would, and there she is—
She lives almost in sight,
And now it's after nine o'clock—
Perhaps he's there to night.

PENITENCE.

I'd almost write to him to come—
But then I've said I won't;
I do not care so much, but she
Shan't have him if I don't.
Besides, I know that I was wrong,
And he was in the right;
I guess I'll tell him so—and then—
I wish he'd come to night!

STOP THAT BOY.—Stop that Boy! A cigar in his mouth, a swagger in his walk, impudence in his face, a care-for-nothingness in his manner. Judging from his demeanor he is older than his father, wiser than his teacher, more honored than the Mayor of the town, higher than the President. Stop him! he is going too fast. He don't see himself as others see him. He don't know his speed. Stop him ere tobacco shatter his nerves; ere pride ruins his character; ere the loafer master the man; ere good ambition and manly strength give way to low pursuits and brutish aims. Stop all such boys! They are legion, the shame of their families, the disgrace of their town, the sad and solemn reproach of themselves.