



ALCOHOL AS A NUTRIENT.



1. Good food fills the blood with life globules, which are carried to all parts of the system to replenish the continual waste of vital action. This is the process of nourishment. The prompt and general performance of this change constitutes the highest health.

2. Alcohol cannot act the part of food in this way, because, as Liebig says, "it is not capable of entering into the composition of blood, muscular fiber, or any part which is the seat of vital principle." Being itself the

product of decay, it cannot be nutritious according to the ordinary laws of food.

3. The other constituents of alcoholic drinks have little or no nutrition. Sherry and lager beer are fair examples. "Sherry contains, in addition to its alcohol and water, only infinitesimal matters which confer on it color, odor and flavor." Liebig says of lager beer, usually considered very nutritious, that it can be proved "with mathematical certainty that as much flour or meal as can lie on the point of a table knife is more nutritious than nine quarts of the best Bavarian beer."—*History and Mystery of a Glass of Ale*, p. 16.

4. Alcohol is not known to undergo decomposition at all within the body. On the other hand, it is known to be freely given off as alcohol by the lungs, skin, and kidneys. The elaborate experiments of Lallemand, Perrin, and Duroy are very instructive on these points. (See "Westminster Review," January, 1860.) Dr. Lees, in his little treatise entitled "Is Alcohol Food?" remarks: "The vital organism obviously treats alcohol as an

intruder, and, irritated by its presence, is roused into an abnormal state of activity, until the last atoms of the offending article are cast out of the temple which it pollutes. Since alcohol will not remain in the living house, but is rapidly expelled from its organism, the belief that it can nourish is an utter delusion. It cannot fulfill the first end of food." Dr. T. King Chambers, in his "Renewal of Life," referring to this state of things, says: "It is clear that we must cease to regard alcohol in any sense as an aliment, since it goes out as it went in, and does not, so far as we know, leave any of its substance behind it." If in a case of dissection we should find bread unchanged in any part of the system, we would at once infer that it could not have nourished the system, because it had imparted nothing to it; and we should reason in the same way about alcohol. We must conclude, then, in the words of Dr. Edmunds, Physician to the London Temperance Hospital, that "the use of alcoholic beverages must involve fruitless wear and tear of the excretory organs as well as a total waste

of the excreted alcohol.”—*Medical Temperance Journal* for October, 1873, p. 10.

5. It has been assumed, without a particle of proof, that alcohol is a supporter of combustion, and therefore it fulfilled an important function of food. This theory is, indeed, disproved by the fact that the production of carbonic acid is decreased by the use of alcohol. Dr. T. F. Markham, in an article in the “*British Medical Journal*,” says: “Alcohol is not a supporter of combustion. Part, probably the whole of it, escapes from the body; and none of it, so far as we know, is assimilated. It is, therefore, not a food in the eye of science.”

6. Alcoholic drinks, so far from being nutritious, or promoting nutrition, always retard or prevent that process. Alcohol destroys the power of the pepsin, which is the vital principle of the gastric juice, separating it from that fluid in the form of a white precipitate. A very small quantity of alcohol introduced into a vial in which food is placed with gastric juice, entirely prevents the process of digestion

which would otherwise take place. The same effect would be produced in the stomach, only that the vital organ absorbs and removes the alcohol as it does other fluids that interfere with its work. When the quantity taken is too large to be thus absorbed, it quite prevents digestion. Meals have been known to lie in the stomachs of hard drinkers twenty-four hours unchanged.

7. Alcohol again interferes with the process of nutrition after the food has passed through the first stages of digestion and entered the blood. Here the alcohol, mingling with it, destroys its vitality, and it becomes a mere speck of fat, incapable of being transformed into any of the tissues it was intended to nourish. Even the shapes of the blood corpuscles is changed by the action of the alcohol, and this change is readily perceived by the microscope.

8. This injury to the blood often occurs in the cases of those who take beer, porter, and other drinks which contain but a small proportion of alcohol. Very often the overtaxed circula-

tion, not being able to carry off this dead matter, deposits it in the cellular tissue, puffing out the skin, and creating a plumpness often seen in beer-drinkers, deceiving both the subject and his friends. It is, however, a plumpness as different from that resulting from the abundant juices, and firm, vigorous muscles of health, as the alcoholic flush is different from the rosy hue of health. Such people do not endure fatigue nor exposure, nor do they give any other substantial proofs of being well nourished.

9. Sometimes the muscles, not finding enough living particles, take up these specks of fat in the blood, and this process eventually induces "fatty degeneration" of the muscles. When this occurs in the heart it often causes death from heart disease, although the subject may never have been tipsy in his life. Dr. Boëcker noted these fatty particles in the blood of habitual drinkers who seemed yet in health, and Dr. Munroe adds: "This devitalized condition of the nutritive fluid is probably the first step toward the devitalization of the

tissue which it feeds.”—*Physiological Action of Alcohol*, p. 9.

10. Dr. Chambers says: “Alcohol is really the most ungenerous diet there is. It impoverishes the blood, and there is no surer road to that degeneration of muscular fiber so much to be feared.” Liebig says its use is continually followed by the expenditure of power, while the true function of food is to give power.

11. Alcohol also injures the coats of the stomach, causing inflammation and disease. Dr. Beaumont saw this state of things in the stomach of Alexis St. Martin, and often to a very serious degree, even when it could not be felt directly by St. Martin himself, because there are very few nerves of feeling in the stomach. Chronic disease may exist without much feeling of it directly. The various stages of disease induced in the drunkard's stomach have been accurately mapped, in a series of plates, by Dr. Sewall, a small copy of which may be found in “Story's Alcohol and its Effects.” Such effects as these are evidently opposed to all

true ideas of nutrition, which is the source of life, health, and power in the animal system.

12. It has been assumed that alcohol conserves strength by preventing the vital changes; but, as the latter are essential to health, that is a gross fallacy. We do not wish to preserve our tissues in alcohol. Exercise gives strength by promoting these changes, and we seek exercise for this purpose. We might as reasonably sit still, in order to retard these changes. Any thing that retards them tends to disease and death.

13. In truth, the burden of proof lies on the other side. Those who claim that alcohol is nutritious should prove it so. And until they do this, their reiterated assertions that it furnishes food and heat in the vital system are both impudent and arrogant.