

by catalysis, or fermentation, some change which, while producing heat, produces also a substance capable of combustion or oxygenation, so that the waste products may pass off with the expired air.

It was my privilege to listen to a paper by Dr. Ford, of St. Louis, read at the meeting of the International Medical Congress at Washington, and occupying forty-two pages of the third volume of the "Transactions." It will repay perusal by anyone interested. Dr. Ford having been a pupil of Bernard, and assisted in his experiments, has continued his investigations, and in nearly fifty experiments described in detail in the paper referred to, has conclusively shown that the sugar in the blood is changed into alcohol; that such change commences in the liver, coincidently with the secretion of sugar; that the change continues in the veins and right auricle, and is completed in the lung, where the alcohol is oxygenized for the purpose of supplying animal heat: that while more sugar is found in the liver than in the lung, the proportion of alcohol in an equal weight of lung and liver tissue is as sixteen to one; and finally he did not fail, in one instance, in demonstrating by the usual tests, the presence of alcohol in the localities indicated.

These facts furnish indications for the use of alcohol. They are well summed up by Dr. Evans in your last issue,—if the system is overloaded with carbon, alcohol is useless, if not injurious, but wherever waste exceeds repair, wherever the powers of assimilation are defective, alcohol, rationally given, furnishes fuel to feed the lamp of life. Dr. Ford has shown that alcohol is one of the normal constituents of the animal body; be it the task of the enlightened physician to advise as to its rational and proper use in health and disease. I was struck with a sentence of the late Sir Andrew Clark in his lecture on Fibroid Phthisis to the students of McGill.

He said, "Gentlemen, the more alcohol you give these patients the longer they will live."
W. STLOAN.

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EDITOR DOMINION MEDICAL MONTHLY:

SIR,—A correspondent in your issue of November in an article, "Is alcohol a stimulant or sedative?" asks the question, "Can a drug have a double action?" Allow me to suggest that we sometimes confound the action of a drug with its effects. If the action of a drug were synonymous with its effects, we might despair of ever formulating any definition of its general action as its effects differ so much according to the circumstances of its prescription. A drug being dead matter, not endowed with intelligence, must always have the same action although its effects may differ to any degree. An acid must always act as an acid, but its effects will differ very much whether it be put into an acid or an alkaline medium. Fire always has the same action, but its effects differ considerably whether it is applied to light a candle or dropped into a powder magazine. Also a sedative must always act as a sedative, although its effects must differ much according to dose and condition of patient. It is impossible that it should one time act as a stimulant and another as the very opposite unless it be endowed with intelligence. The most wholesome food may have an emetic or purgative effect under certain circumstances, yet no one says that food is at one time a wholesome nourishment and at another a purgative. As we often improve a patient's health by diminishing or withholding food, so the administration of a sedative is often the best stimulant. There is no such thing as a universal tonic. To one mercury is the best tonic, to another a purgative, and to another an emetic. Aloes is one of our best remedies for the relief of chronic diarrhoea, and ipecac frequently relieves vomiting, yet who denies that the action of