

in the production of heat, occurs in the first part of a period of deprivation of food, and this saves, to a certain extent, destruction of the solid tissues. One of the most marked and constant condition in fever is a disturbance of the heat-producing process, in which the solid tissues are consumed and the production of water is greatly diminished. It is a rational object of treatment to endeavor to restore the normal equilibrium between the consumption of the so-called solids and the formation of water as factors in the production of heat. If it were possible to introduce farinaceous and fatty articles of food in sufficient quantity in fever, it might not be necessary to use alcohol; but the condition of the digestive organs is such that these articles are slowly and imperfectly prepared for absorption. Alcohol, however, requires no preparation by digestion. It is promptly taken up by the blood and is oxidized even more readily in fever, than in health." At another place the same author states: "Alcohol judiciously administered, so that all that is introduced is promptly and completely oxidized, as it contributes material for consumption in the production of excess-ive heat, exactly in that degree does it retard destruction and degeneration of tissue; and it should be employed to supplement the use of matters that are regarded as nutritive.

If the medical, stimulating effect of alcohol is desired, we may safely say that, just in proportion as the heart muscle fails to perform its duty properly, alcohol is useful. To state that any certain quantity of alcohol be an appropriate dose, as can be done in the large majority of drugs, would be a fallacy, just as is the case with opium. Habit, age, sex, have a certain influence in determining the amount of either alcohol or opium to be given as a dose; but we should rather endeavor to obtain a certain effect without regard to amount used than adhere to rules laid down in the text-books. In one case the amount of pain to be relieved should be our guidance, and, in the other, the heart's action or its indicator—the radial pulse—should be the criterion for the amount to be given. It should be remembered that the effects of alcohol pass

off quickly, and after the heart has once responded to the influence of the stimulant it should not be allowed to relapse to its previous condition. Alcohol should under such circumstances be administered rather frequently and always at regular intervals, even during night-time. No one would ever think of telling his patients to take belladonna, strychnia, digitalis, or any other powerful remedy in doses to suit themselves or in "liberal quantities," and neither should alcohol or its preparations be prescribed in a loose or careless manner; neither the amount to be given nor the time of its administration should be left to the judgment of the patient or his friends. Peremptory orders and directions are as necessary to obtain good results from the drug under consideration as is the case with the others mentioned above. The fact that many practitioners neglect to regard alcohol as a powerful drug is responsible in a high degree for the harm done sometimes by cultivating a taste for alcoholic stimulants.

The dietetic virtue of alcohol is well proven in cases of wasting febrile disease of either acute or chronic nature, and is best illustrated by typhoid fever in one and by pulmonary phthisis in the other case.

The form in which alcohol is to be given deserves consideration. The one rule which must always be followed is to administer it *well diluted*. A difficulty arises when we come to decide which preparation of alcohol to use; pure absolute alcohol, rectified spirits of wine, brandy, whiskey, rum, arrac, gin, different kinds of white or red wine, champagnes, beer, cider, cordials of various names, and last though not least, kumiss, all contain alcohol in larger or smaller proportions, and it is of importance to select in each case the most suitable one of these preparations. In deciding in favor of one or another of these articles, we must be guided by the desire to obtain such as contains alcohol in its purity; but we must not overlook the fact that they contain other constituents which must by no means be regarded as playing an unimportant part, and which might retard or even interfere with the good effect of alcohol. Rectified spirits diluted with water, fla-