

time after it has been drawn from the mammary glands. The chemical effect of boiling milk is to destroy the vitality of these cells and to coagulate all their proteid constituents, notably the albuminates of fluorin and iron. Even if it be claimed that the casein of milk is altered by contact-action of the gastric juice into peptones and albuminoses, and absorbed as such, it cannot be denied that the absorption of the serum-albumin is by osmosis. Constipation, scurvy, and rickets more often follow from the use of devitalized forms of proteids than that of proteids in a living form. In milk submitted to the process of sterilization butyric acid is not infrequently met with in place of lactic acid, and the butter-fat of milk so prepared is broken up largely in the stomach, where further supplies of free butyric acid are split off. In order, therefore, to minimize the risk of the fats undergoing rancid degeneration, boiling, pasteurizing, and sterilizing are to be avoided, except in cases where the source and age of the milk cannot be ascertained.

The main argument in favor of well-cooked food (meat and milk) is that it kills the germs present in it, and prevents the transmission of bovine tuberculosis. No one claims that the toxins of the pathogenic bacteria can thus be destroyed, or the spores of all bacteria thus killed. The chemical poisons (toxins) produced are not altered by the application of heat under 300 deg. F., whilst the immunizing and protective substances are destroyed at the temperature of boiling milk. Further, milk boiled and subsequently exposed to infection is a better culture medium for bacteria than raw natural milk.

The evidence accumulated during recent years indicates that there is a difference between the tubercle bacillus met with in the lower animals and that which affects man. The bovine bacillus, when it finds lodgment in human beings, does so almost exclusively in children under the age of eleven years, whilst the micro-organism of adult tuberculosis has been allowed to grow up under the fostering care of sanitarian and antituberculosis societies, for it is already becoming very difficult to induce intelligent laymen to forswear their religious convictions of its truth, and adopt the systemic use of raw proteid products.

The juice of raw vegetables, although certainly containing valuable ferments, and therefore preferable to cooked green-stuffs, is by no means a substitute for raw animal juices and secretions. They stimulate gastro-intestinal metabolism, reduce abdominal discomfort, and supplant the use of cathartics, but, being mainly derived from plants deficient in proteids, do not