

in a practically sterile condition ; while—thanks to the work of Snitken, Holt, and others—we have definite and correct ideas of how much should be given at each time of feeding, and the interval that should elapse between the feedings.

In some of my cases, these means carefully carried out yielded gratifying results, but in others my hopes were disappointed. The infants, though apparently free from digestive troubles, did not thrive, continued to look puny, and only very slowly increased in weight, clearly indicating that my food was faulty.

Since then several communications have from time to time appeared in our medical magazines, where others have related a similar experience ; and corroborating this clinical experience, Dr. Hiesland of Philadelphia and Dr. Leeds of New York have published the results of their individual investigations on the effect that prolonged heat has on the milk. They both speak very similarly of the changes which milk undergoes in the sterilizing process. Their observations may be briefly epitomized as follows :—

I.—The starch liquifying ferment, galactozymase, which exists in normal cow's milk in minute quantities, is destroyed when the heat rises much above 165°F. (75°C.).

II.—A portion of the lactalbumin is coagulated.

III.—The casein, after the action of prolonged heat, is less readily coagulated by rennet, and yields slowly and imperfectly to the action of pepsin and pancreatin.

IV.—The fat globules are injuriously affected by the heat. The fat is freed to some extent, and after standing, small lumps of butter fat are sometimes observed on the surface of the milk, while the portion not freed has a decidedly lessened tendency to coalesce. When sterilized and unsterilized portions of milk were churned, and a note made of the time required to form appreciable amounts of butter, the unsterilized was found to yield a larger amount in considerably less time than the sterilized.

V.—Milk-sugar, by long-continued heating, is completely destroyed ; that it undergoes some change in the process of sterilization is shown by a lessened dextro rotatory power.