

The lactic acid bacteria come from the teat of the cow, and can be largely eliminated by throwing away the first few streams when milking. Pathogenic bacteria get into the milk through the water used in cleaning the vessels or from persons who handle the milk. Putrefactive bacteria come from the manure. Great care should be taken in cleansing the udder and teats before milking, as well as the hands and finger nails of the milker, who should wear a duster over his working clothes. The stables should also be clean." The general practitioner is now awakening to the supreme importance of this subject, and the future is likely to witness improved methods in the production as well as in the distribution of milk throughout the country.

Sterilization.—Pediatrists are now practically agreed that sterilized milk is unfit to be used for any length of time as an infant's food; but the general practitioner, who is somewhat rusty in his chemical knowledge, has been slow to recognize the fallacy of the method, and many physicians have yet to learn that heating milk to a degree necessary to effect its sterilization (*i. e.*, to destroy existing bacteria) must necessarily produce chemical changes therein, which will seriously interfere with its nutritive properties as well as its digestibility. Recent investigations have shown that milk raised to a temperature of 100° C. is altered in the following particulars:

1. Its proteids are modified and rendered less digestible, *i. e.*, the lactalbumin and globulin are coagulated, and the casein so altered as to increase its resistance to the disintegrating action of the gastric ferments.

2. The combination of its saline ingredients with the proteids is more or less broken, and the salts assume a condition in which they are less readily absorbed; *i. e.*, the lactose is partially changed and the organic phosphorus is converted into an inorganic phosphate, both of which changes interfere with the digestibility of the milk. Wroblewski has shown, too, that certain of the calcium salts, necessary for the coagulation of the milk in the stomach (and which in raw milk are in a soluble state) are made to enter into insoluble combinations by a high temperature.

3. Natural ferments which are present in milk, and which naturally assist its digestion in the infant's stomach, are destroyed; Russell and Babcock having proved that unsterilized milk undergoes a self-digestion owing to the presence of a trypsin ferment readily destroyed by heat.