

MILK

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Milk by E. F. Brush

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E. F. BRUSH

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PHYSICIAN, VETERINARIAN AND DAIRYMAN.



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PREFACE.

This volume is simply a collection of essays contributed to the various medical societies and journals during the past seventeen years. It would be vain for the author to claim that there was no other motive than that of love for scientific truth impelling the work. However, as a physician and veterinarian, it cannot be judged dishonest for him to say that there has been a sincere desire to reach the truth and follow it. And, on the other hand, as a dairyman trying to produce the best milk that is within human possibility, there has been, of course, more or less trade interest. Therefore, if these two designs can be allowed without prejudice on the part of the reader, there is hope that the work will benefit others as well as the author.

Mount Vernon, N. Y., April, 1898.

MILK.*

The position that milk occupies in scientific works at the present day is very unsatisfactory to the medical practitioner. Almost every author gives a different analysis, and many of the phenomena still remain unexplained. The lactometer which has been merely a source of dispute in the past is now abandoned. The majority of works on milk analysis lack precision in details, because they mostly leave out albumen as a constituent of milk and mass together all the milk salts as sugar. This, of course, is very unsatisfactory and misleading, for it is a fact regarding these substances, that on the proportion existing between them and the caseine the quality of the milk depends. I have previously stated in the *New York Medical Journal* the fact that, as caseine decreases, the milk, sugar and the albumen increase, and *vice versa*. By ascertaining these we can determine the wholesomeness of any given specimen of milk.

*An essay read before the Medical Society of the County of Westchester at the Annual Meeting, held at White Plains, Tuesday, June 21, 1881.

But, in examining milk, we must consider another point, that is the position it occupies as a producer and distributor of disease. Compared with this acknowledged fact, simple dilution with water is of slight importance. Diseases may be conveyed by milk taken from an animal suffering from disease, or by milk contaminated in the dairy, or by contact with diseased or infected persons. There is no definite law forbidding the sale of milk from diseased animals. On reading the last Report of the Department of Agriculture, I find a statement made by a dairyman on Long Island, in which he declares to the commissioners that for twenty years he has had cases of pleuro-pneumonia in his herd. In this disease the flow of milk is not usually entirely suspended, and it is only lessened slightly during the first few days of active fever. When the flow is suspended, it is during the extreme heat of summer, when the disease attains its utmost violence — that is, when the animal is about to die. There can be no doubt that the milk of a cow suffering from a disease of this character must be poisonous. On analysis of milk thus diseased, I have discovered an increased amount of albumen as the only difference. Garget, an inflammatory condition of the internal substance of the udder, is another vaccine disease which causes unwholesomeness

in milk. In cases of foot-and-mouth disease — a disease producing in the cow aphtha, diarrhoea and enlarged glands — Dr. Joseph Weil writes that the “raw milk produces a feverishness, swelling of the tonsils and submaxillary glands and pemphigenous eruptions on the lips and tongue.” I need not, even if time permitted, enumerate all the other diseases which infect milk. But this dissemination of disease by diseased milk is a fact which we medical men ought to recognize. We ought to bestir ourselves to procure legislation defining the duties of milk-producers as regards the health of their animals. At present the whole law seems to have been made for the pecuniary protection of corporations and herdsmen. In fact, half of the laws are enacted to protect butter and cheese factories from skim-milk and oleomargarine. It is significant that the first law passed in this State respecting milk was passed, not to prevent the Orange County Association from selling diseased milk, or for protecting the thousands of children whose food it supplies, but to prevent their agents from defrauding them. The whole tenor of the law is in the same direction. There is indeed a law saying unhealthy milk must not be sold, but the definition of “unhealthy,” as given in the law, is “milk from cattle feeding on