

Lisping.

A CLERGYMAN, with usually an exceptionally distinct utterance, was observed one Sunday morning at the beginning of the service to speak with a pronounced lisp. After a time it wore off, and his speech became as clear as usual. Has it ever occurred to anyone what a very simple thing may cause a lisp? The case in question was owing to a tiny slice of lozenge sticking to the roof of the mouth just to the left of, and close to, the front tooth. This almost imperceptible impediment was sufficient to render the speech so indistinct as to resemble a marked lisp. Of course as the lozenge dissolved the lisp became no longer observable, and the speech assumed its ordinary clearness.

These being the facts, the question that occurs to every thoughtful mind is, If the cause of lisping be so simple, why cannot the remedy be as simple and yet effectual?

The answer I leave to be supplied by some of your scientific readers.

A NON-LISPER.

ETIOLOGY OF SCARLET FEVER.¹

AMONG the infectious or zymotic diseases there are two at any rate (namely, scarlet fever and diphtheria) of which it may be said that their spread is to a lesser extent dependent on defective domestic sanitation than is the case with some of the other zymotic diseases, as, for instance, typhoid fever. Indeed, it is maintained by competent authorities that scarlet fever and diphtheria do not invade the houses of the poor with faulty sanitation with greater frequency or with greater severity than those of the well-to-do, however perfect the sanitary arrangements. This view is based on the important experience gained during the past twenty years, viz. that epidemics of scarlet fever and diphtheria have been brought about by milk. I may here state by way of explanation that a fact well established, and needing no further comment, is that scarlet fever and diphtheria are, like small-pox, measles, whooping-cough, and typhus fever, communicable directly from person to person. This mode of infection, doubtless an important one, and coming into operation in single cases wherever the elementary rules of isolation and disinfection are transgressed, altogether sinks into insignificance when compared with the infection produced on a large scale, if a common article of diet like milk should become in some way or another the vehicle of contagium, as has been proved to be the case in a number of epidemic outbreaks. These epidemics, known as milk scarlatina, milk diphtheria, and I may add also milk typhoid, have this in common, that almost simultaneously, or at any rate within a short time, in a number of houses, having no direct communication by person or otherwise with one another, there occur sometimes singly, sometimes in batches, as it were, cases

of illness: scarlet fever, diphtheria, or typhoid fever as the case may be. And it was this peculiar character which pointed to a condition which must have been common to all these households. On closer examination it was indeed found that all these households had this, and only this, in common, that they were all supplied with milk coming from the same source—that is to say, from the same dairyman. Other houses supplied with milk from a different source escaped; and further it was shown that, as soon as the consumption of the suspected milk ceased also, the epidemic, as such, came to an end, except of course the cases due to secondary infection from person to person. The Medical Department of the Local Government Board have had for years past their attention fixed on these milk epidemics, and in the Reports of the Medical Officer many of these are described with great detail; amongst these, Dr. Ballard's Report in 1870 on enteric fever in Islington, Dr. Buchanan's in 1875 on an outbreak of scarlet fever in South Kensington, and Mr. Power's on an outbreak of scarlet fever in St. Giles and St. Pancras in 1882, are specially to be referred to. Mr. Ernest Hart has tabulated all the outbreaks of milk epidemics that have been investigated until 1881, in vol. iv. of the Transactions of the International Medical Congress for 1881. Now, analyzing these outbreaks as far as they refer to scarlet fever, there are several of them where the assumption that the milk acquired the power of infection by contamination from a human source cannot be excluded. This infection if proven would stand on the same footing as if due to contagion from person to person, for it is clear whether the contagium is conveyed from one person to another by air, food, drink, or other articles, it always remains contagion from person to person. Now, in some of the epidemics tabulated by Mr. Hart, and recorded by subsequent observers, *i.e.* after 1881, this mode of milk contamination cannot be excluded, as I said before; but comparing the dates when the milk might be supposed to have become so contaminated with the dates when the milk has actually produced infection, it will be found that a certain discrepancy exists, and as will be shown later another mode of infection, viz. from a person affected with scarlatina to the cow, and through the cow to the milk and then to human beings, cannot be excluded either. There are other epidemics recorded in these tables, in which the mode of infection of the milk is not ascertained; and in a third set, the milk acquired infective power in some way or another, but certainly not from a human source. As an illustration of the first group of epidemics, *i.e.* probable contamination from a human source, I will refer to the table given by Mr. Ernest Hart on page 539:—

1881, April.	Keswic'.	J. Robertson, M.D., M.O.H.	A dairy closely adjoined a house where scarlet fever had existed for several weeks. The cows were milked, every night and morning, into an open tin can carried across an open yard past the affected house.	The children who first caught scarlet fever in the locality played about the yard whilst in a state of desquamation.	On one particular day a general epidemic of scarlet fever broke out in the town, between thirty and forty families being invaded. All those suffering from the disease received their milk-supply from this particular dairy-farm. Some member of every family supplied had either a scarlatinal sore throat or scarlet fever on this day. Other families supplied from a different source escaped the disease.	A lodger had the milk raw for supper and was attacked. His landlady boiled her milk the same night and escaped.
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¹ Lecture delivered by Dr. E. Klein, F.R.S., at the Royal Institution on Friday, May 27, 1887.