

Emile Berliner*

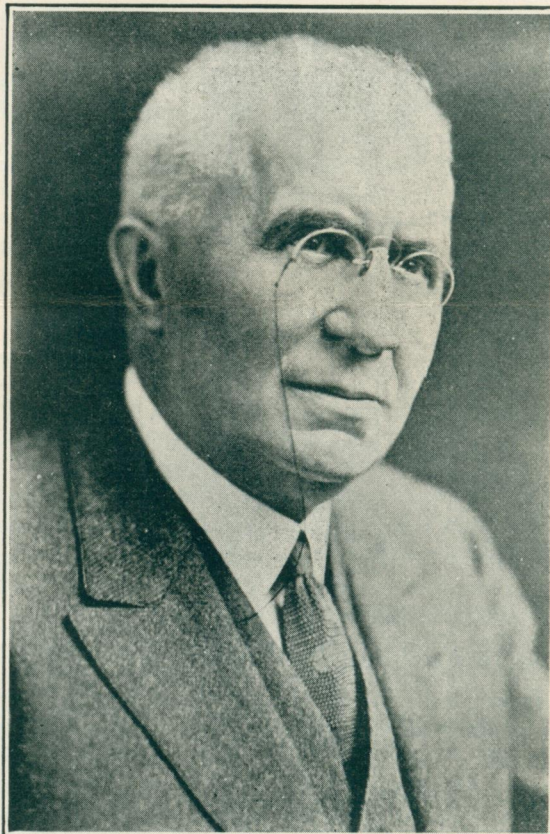
By GEORGE M. KOBER, M.D., President, District of Columbia Tuberculosis Association

EMILE BERLINER, a former President of this Association and one of Washington's most useful citizens, is about to celebrate the seventy-fifth anniversary of his birth. He was born May 20, 1851, at Hanover, Germany, graduated at the Samson School, Wolfenbuettel in 1865, and came to this country and settled in Washington, D. C., in 1870.

Mr. Berliner's brilliant career as an inventor from 1877 to the present time can be mentioned only briefly. His efforts resulted in the invention of the transmitter or microphone and an induction coil and in the completion of Dr. Bell's magnetic telephone. In 1887 he invented the gramophone, also known as the "Victor Talking Machine." For these inventions he was awarded the John Scott Bronze Medal and the Elliot Cresson Gold Medal by the Franklin Institute, Philadelphia. He also invented and perfected the present method of duplicating disc records. He was the first to make and use in aeronautical experiments a light-weight revolving cylinder internal combustion motor. Within the last year he has perfected an invention in the field of hall acoustics. All of these achievements have contributed to the material advancement and happiness of the people of the world.

It is not generally known, however, that about twenty-five years of Mr. Berliner's useful life have been devoted to the promotion of health and the eradication of preventable diseases. Mr. Berliner's interest in public health dates back to the time when he became deeply concerned about the frightful infant mortality in the City of Washington. He had lost one child from gastrointestinal trouble and had barely saved another. The records showed that in 1878 out of every 1,000 children born in Washington, 322 perished before the completion of the first year. In 1895, when the writer first took up the study of impure milk in relation to infant mortality in this city, the rate was still 297.2 per 1,000 and fully 40 per cent of the deaths were caused by gastrointestinal diseases, and 2.5 per cent from primary tuberculosis of the intestinal lymphatics, all of which pointed to the fact that the morbid agent in these cases was introduced into the body with the food.

* An anniversary tribute in commemoration of his seventy-fifth birthday, May 10, 1926, before the Association for the Prevention of Tuberculosis of the District of Columbia.



EMILE BERLINER

Mr. Berliner fully appreciated the dangers lurking in raw milk, and that this valuable article of food could be rendered safe by heating it, thus killing most of the disease germs which might be present. Unfortunately the American Pediatric Society opposed general pasteurization of the milk as advocated by scientists, claiming that children did not thrive on heated milk, and contracted scurvy and rickets from being fed on it. This opinion was upheld for a long time by the general profession. Mr. Berliner, convinced of the correctness of the conclusions enunciated by a few sanitarians, realized that there appeared to be no one to warn the public against the dangers of raw milk and dairy products, and he decided in the spring of 1901 to take up the task of educating the public in this important field of health work. After talking over the matter with some of his friends, he

concluded to form a "Society for the Prevention of Sickness" and began to spread information through bulletins printed in the Sunday newspapers.

The first bulletin appeared in the Washington Post on June 15, 1901, and read as follows:

"Milk is notoriously one of the best soils for the germination and multiplication of disease germs. Many epidemics of typhoid, scarlet fever and diphtheria have been traced to infected milk, not to speak of tuberculosis from the same source. Inspection is rarely thorough and does not prevent contamination of the milk supply. Scalding or sterilizing milk will destroy most of the virulent germs, if not all.

"Some people say that you should not scald milk for fear of making it less easy to digest. This is a very small matter compared with infection. The advice is besides unfounded and should be disregarded.

"Robust people may with impunity disregard rules of precaution, which are necessary with weaker constitutions and children. Therefore scald your milk and boil or filter Potomac water."

"SOCIETY FOR THE PREVENTION OF SICKNESS"

It would be interesting for modern milk sanitarians to look through Mr. Berliner's collection of milk bulletins. They were changed every week. Many authorities were cited, the whole field of milk dangers was spread before the public, and every bulletin ended with the slogan "Scald the milk and keep it cool and covered afterwards." The fact that inspection alone is insufficient was accentuated.

A decided step forward in the movement for safe milk was taken in the year 1907 when the Committee on Tuberculosis of the Associated Charities of which General Sternberg was Chairman, created a Milk Committee, and made Mr. Berliner its Chairman. At the initial meeting of this Committee, Dr. E. C. Schroeder of the U. S. Department of Agriculture made known his recent discovery that the feces of tuberculous cows are often heavily charged with virulent tubercle bacilli and pointed out that the examination of numerous samples of market milk disclosed that very little entirely free from contamination with cow feces reaches the consumer, hence, that the presence of a single tuberculous cow in a dairy herd must be regarded as a danger through which any portion or all of the milk from the herd may become infected with tubercle bacilli.

After milk problems had been discussed for several hours, Mr. Berliner proposed that the Committee recommend the calling of a Milk Conference which should have among its members scientists from the Government Bureaus. This recommendation was accepted by General Sternberg, and the Conference, the first of its kind, was called to order by the Commissioners of the District of Columbia on March 30, 1907.

This Conference was composed of prominent sanitarians gathered from the local scientists, and from the Bureaus of the Federal Government. Besides these, members of the Bar Associations, Washington Academy of Sciences, Veterinary Association and representatives of milk producers and dealers were present. Milk standards were for the first time promulgated and the cause of pasteurization of all doubtful milk received the emphatic endorsement of the Conference. The proceedings and conclusions of the Conference were published by the Department of Agriculture in 1908 as Circular 114, and the milk standards adopted laid the foundation for progressive municipal and state dairy laws both in this country and abroad. This and the report of the joint Commission of the Federal Agencies on "Milk and Its Relation to Public Health," published in 1908 as Bulletin 56, greatly increased activities for a pure and safer milk supply everywhere and convinced many health officers and physicians that nothing short of pasteurization could confer immunity from so-called milk-borne diseases.

With such backing, Mr. Berliner on behalf of the Society for the Prevention of Sickness continued the campaign with increased vigor and among other things attacked the indiscriminate use of raw milk in the hospitals of Washington. The subject of hospital milk was presented by Mr. Berliner at a meeting of the Association for the Prevention of Tuberculosis, May 1, 1913, and the following resolution was unanimously adopted:

"That this Association expresses a strong protest against the continued use at hospitals in this city, of raw milk and raw cream and that such milk and cream should by all means be properly pasteurized, cooled and kept cold until used."

Copies of the Preamble and Resolutions were ordered to be sent to the Commissioners of the District of Columbia, to the Board of Charities and to the Committees on the District of

Columbia of both Houses of Congress with a view of securing remedial action.

The Society in its bulletins also pointed out the dangers from ice cream, butter and dairy products from nonpasteurized cream and milk.

When Mr. Berliner began this popular health education the infant mortality was still 274.5 out of every 1,000 children born. Not a quart of milk sold in the District of Columbia was pasteurized. In 1914, according to Health Officer Woodward, over one half of the bottled milk sold in Washington was pasteurized, and in 1924, according to Health Officer Fowler, 97 per cent of the entire market milk was pasteurized. There was no law compelling it, but public education forced a demand for it finally in 1925. In 1924 the infant mortality was as low as 75.7 per 1,000. Typhoid fever has been reduced from 72 per 100,000 of population in 1900 to between 4 and 5 per 100,000 in 1924. Pulmonary tuberculosis has been reduced during this same period from 492 in the colored population to 238, and in the white population from 183 to 62. Last year it was as low as 50. Finally in 1925, the extended efforts of Mr. Berliner's Society to secure pure milk for the District culminated in the passage by Congress of a modern milk law.

This is indeed a field of glory, and Mr. Berliner's method of popular education has been a most important factor in bringing about these beneficent results. Scientific facts might have remained unnoticed for a long time without this popular education.

As a pioneer worker in the prevention of tuberculosis, Mr. Berliner was appointed chairman of the Committee on Publications of the District Tuberculosis Association. One of the earliest activities of the committee was the distribution in the Washington schools of 25,000 copies of the twelve health rules adopted by the Association. A small book called the Washington Health Rules, containing chapters on the various rules, was brought out and distributed among teachers. More recently Mr. Berliner has converted the rules into Health Rhymes, which, with their colored illustrations, are particularly adapted for third-grade children.

In the publication of the Sunday Health Bulletins for the Tuberculosis Association, prepared by Mr. Berliner, attention was given to the early signs of tuberculosis; medical examinations by the family physician were advocated, and also visits to the clinic of the Health Department or hospitals. The effect of this publicity is that

many incipient cases of consumption or other diseases are discovered early and respond to prompt treatment. This publicity has undoubtedly helped greatly in the reduction of the general death rate in the District of Columbia from 21.37 per 1,000 in 1900 to 13.46 in 1924.

In 1920, as a stimulus to interest in the Modern Health Crusade, Mr. Berliner endowed a silver Trophy Cup, to be awarded annually by the National Tuberculosis Association to the city showing the largest proportionate enrollment of pupils engaged in the Crusade. This cup was awarded to the public schools of Washington and presented by President Harding in 1921. A similar trophy was endowed by Mr. Berliner for awards in the Dominion of Canada in 1925.

In addition to paying all the expenses of the Society for the Prevention of Sickness for 25 years, Mr. Berliner in 1924 erected a Health Building in Washington for the use of the Bureau of Health Education and the Tuberculosis Association, and provided a liberal endowment fund to carry on the popular health education inaugurated by him in 1901.

In appreciation of his varied and long continued activities in the field of public health, the Board of Directors of the Association for the Prevention of Tuberculosis of the District of Columbia at its meeting on June 10, 1926, paid Mr. Berliner an anniversary tribute from which the following sentences are quoted:

"Mr. Berliner's interest in health education, his belief in the value of publicity and reiteration of health precepts in the public press and through the printed page are too well known to his colleagues of this association to call for extended remarks. In the monthly minutes of the meetings of the Board of Directors the reports of the Chairman of the Committee on Publications bear permanent testimony to Mr. Berliner's efforts to spread the gospel of positive health.

"We, the directors of this Association, congratulate ourselves in having had as President of the Association from 1917 to 1922 and a charter member of the Board of Directors, Emile Berliner, a man whose inventions have brought happiness and pleasure to countless thousands, as well as honor, fame and world-wide recognition to himself, by fellow scientists, and whose devotion to public health and public welfare have not been second in interest to his scientific pursuits."