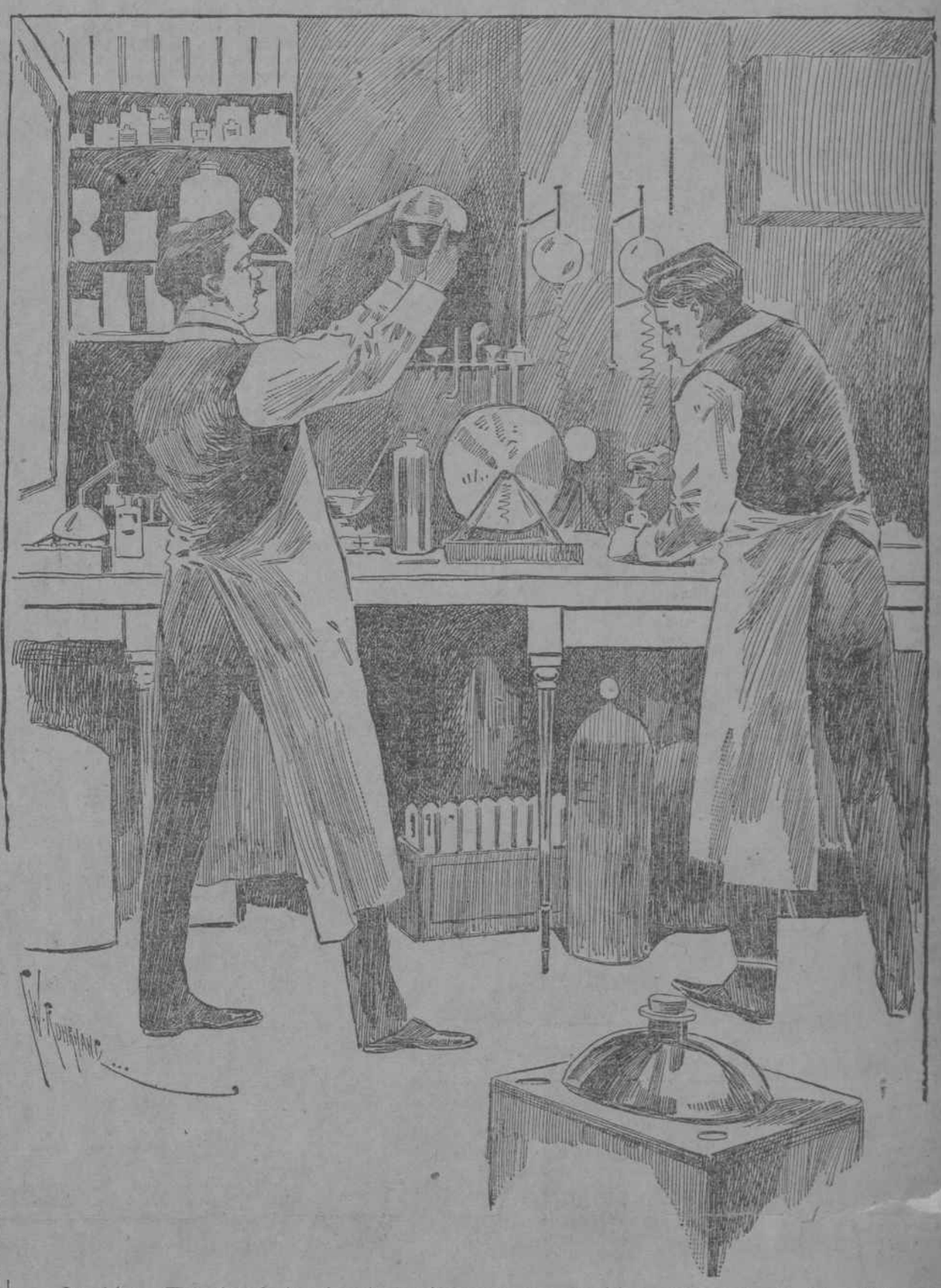
CONSUMPTION TO BE CONTROLLED BY THE HEALTH BOARD.

Officials Hope to Almost Do Away with It by Treating It as a Communicable Disease---A Great Scientific Sensation.

Delving for Facts Concerning the Bacteria of Consumption



In the Bacteriological Laboratory of the Board of Health.

Very soon the New York City Board of Health will adopt measures which, it is hoped, will practically do away in this city with humanity's most dreadful disease—consumption. This is a step along the line of scientific progress far in advance of any made by any of the health boards of the world. Medical men have been convinced for years that consumption (or tuberculosis in any of its manifold forms) is a communicable disease—that is, that its germ can be transferred from man to man. They have known, therefore, that it should be subjected to the same rigid official supervision which is now given to diseases known as contagious or infectious. But no official body has heretofore taken the steps necessary to bring it about. In the first place, these steps are difficult to devise. In the second place, they have been supposed to be of a character which would cause much popular antagonism. The sufferers from consumption are ever the pets of their loving friends. Their disease is free from the loathsome features and evident danger of smallpox or other catching complaints. The danger of contact with them is almost wholly hidden. It has been thought that no plan of official supervision of consumption cases could be invented which would not outrage the feelings of both patients and friends.

But the Board of Health of New York City has found ways of overcoming both of these difficulties. It has arranged to watch consumption closely and to stamp it out, so far as is possible. It has arranged to do it in such a way that nothing but feelings of admiration and gratitude can exist in the minds of either the sufferers or their sympathizers.

It has again demonstrated the fact which is recognized throughout the civilized world—that the New York City Board of Health is the most progressive and efficient body of its kind on earth.

DR. HERMAN BRIGGS, OFFICIAL BACTERIOLOGIST OF THE BOARD OF HEALTH:

I consider the plan of the New York Health Board one of the most important steps in advance taken in a long time.

Advanced medical science has robbed consumption of its terrors and shown that it is much more easy to prevent than contagious diseases. It has shown, too, that, contrary to popular belief, the affliction is rarely hereditary, and that it is a distinctly communicable disease.

There is a widespread feeling among the medical profession and the laity that some sufficient means should be taken to prevent the great and unnecessary loss of human life caused by consumption and that it is imperative that sanitary authorities adopt such measures as science has shown to be efficient in controlling the ravages of the disease. And the New York Health Board has taken the lead.

The greatest source of danger is in public conveyances and meeting places where persons are liable to expectorate on the floor, but with the broadening of the work in hand by virtue of law and the greater dissemination of knowledge regarding the liability of contracting the disease the danger will be greatly lessened. As it is, millions of people now healthy are daily threatened by the disease. I do not sound the note of an alarmist, but this statement is amply borne out by incontrovertible facts.

The time has now arrived when it becomes the duty of all sanitary authorities to assume a more aggressive attitude toward this, the most widely prevalent and fatal disease to which the human race is subject.

It is known as tuberculosis, and is not necessarily confined to the lungs. It may affect any organ or tissue of a body. When it affects the lungs it is called pulmonary tuberculosis, or consumption.

In this form it causes about one-fourth of all deaths occurring in the human during adult life, and more than one-half of the entire adult population at some time of life acquire it.

It has been proved beyond a doubt that a living germ called a tubercle bacillus is the cause, and the only cause, of tuberculosis. When these germs find their way into the body they multiply there if favorable conditions for their growth exist, and produce small new growths or nodules, which tend to soften. The discharges from these softening tubercles containing the living germs are thrown off from the body. In pulmonary tuberculosis the expectoration contains the germs, often in enormous numbers. It has been shown that many millions of tubercle bacilli may be discharged under certain conditions by one person suffering from tuberculosis in the course of twenty-four hours.

The germs thus thrown off do not grow outside the human or animal body, except under especial artificial conditions. But they may retain their vitality and virulence for long periods, even when thoroughly dry. As tuberculosis can only result from the action of these germs, it follows from what has been said that when the disease is acquired it must result from receiving into the body the living germs that have come from some other human being or animal affected with the disease. In other words, it cannot occur except by direct communication from some other individual or animal suffering from tuberculosis.

While the meat and milk of tubercular cattle may be important sources of danger, yet the disease is acquired as a rule through its communication direct from man to man. The expectoration of tubercular persons frequently lodges in places where it afterward dries, as on handkerchiefs, clothing, carpets, floors, the streets and so on. After drying it is very apt in one way or another to become pulverized and float in the air as dust. Pulmonary tuberculosis or consumption is usually produced by breathing air in which the living germs are suspended as dust. It has been shown experimentally that dust collected from the most varied points in hospital wards, asylums, prisons, hotel bedrooms, private houses, etc., where consumptive patients have lived, is capable of producing the disease.

Such dust may retain for weeks, and even months, its power of causing disease, and persons inhaling the air in which this dust is suspended breathe in the living germs.

It should, however, be distinctly understood that the breath of tubercular patients is not an element of danger; only the dried and pulverized sputum. The breath is free from danger because the germs are not dislodged from moist surfaces by currents of air. If all the discharges were destroyed at the time of their exit, by far the greatest danger of communication from man to man would be removed.

A person's susceptibility of "catching" consumption through floating bacilli depends upon his individual resistance to the virus. The liability varies, of course, at different times, and is increased with local or general inflammation of the bronchial tubes. Tuberculosis frequently follows an attack of measles. In fact, it is likely to follow all infectious diseases.

It is a fact well known that some persons, and especially the members of some families, are particularly liable to tuberculosis. So marked and so frequent is the development of the disease in certain households that the affection has long been considered hereditary. We now know that the disease itself is very rarely hereditary; but there is inherited a liability to the disease, which renders the individual a more easy prey to the living germs when once they have gained an entrance. Where the parents are affected with tuberculosis the children, from the earliest moments of life, are exposed to the disease under the most favorable conditions for its transmission, for not only is the dust of the house likely to contain the bacilli, but the relation also between parents and children, especially between mother and child, are of that close and intimate nature especially favorable for transmission by direct contact. The frequent occurrences of several cases in a family is, then, not to be explained on the supposition that the disease itself has been inherited, but that it has been produced after birth by transmission direct from some other individual.

Tuberculosis is a communicable disease and is distinctly preventable. The means which are most certain to prevent its spread from one individual to another are those of scrupulous cleanliness regarding the sputum. These means are largely within the control of the affected individual. It should be constantly kept in mind that it is the sputum and the sputum alone which is commonly the important agent of its transmission. It is furthermore to be remembered that consumption is not always, or even generally, as was formerly supposed, a fatal disease, but that in a large proportion of cases, if recognized early, it is a distinctly curable affection. An individual who is well on the road to recovery may, if he does not with the greatest care destroy his sputum, diminish by self-inoculation his chance of recovery. The following facts should be especially emphasized:

First—That tuberculosis is a communicable disease and is distinctly preventable.

Second—It is acquired by the direct transmission of a tubercle bacillus from the sick to the well, usually by means of dried and pulverized sputa floating as dust in the air.

Third—It can largely be prevented by simple and easily applied measures of cleanliness and disinfection.

The time has long since arrived when the knowledge concerning the causation, extension and prevention of pulmonary tuberculosis is sufficiently definite to make possible the adoption of important practical measures for its restriction. My first recommendations which are being worked out are:

First—That there be systematically disseminated among the people by means of circulars, publications, etc., the knowledge that every tubercular person may be a source of actual danger to his associates, and his own chances of recovering may be diminished, if the discharges from the lungs are not immediately destroyed or rendered harmless.

Second—That all public institutions, such as asylums, homes, hospitals, dispensaries, etc., be required to transmit to the Board of Health the names and addresses of all persons suffering from pulmonary tuberculosis within seven days of the time when such person first came under observation.

Third—That special inspectors be assigned to duty for the investigation of this disease, and whenever the department has become aware of the existence of families or premises where tuberculosis exists, or has recently existed (as in the case of death or removal), it shall be the duty of these inspectors to visit such premises, deliver proper circulars, and give suitable information to the persons residing there, and take such specific measures of disinfection as are required in each case.

Fourth—That the Board urge upon the hospital authorities the importance of separation so far as possible in the hospitals of this city, of persons suffering from pulmonary tuberculosis from those afflicted with other diseases, and urge that proper wards bet set apart for the treatment of this disease.

Fifth—That the Department of Charities of this city be requested to provide a hospital, to be known as the Consumptive Hospital, to be used for the exclusive treatment of this disease, and that, so far as practicable, all inmates of the various institutions under its care, suffering from tuberculosis, be transferred to this hospital.

Sixth—That the Health Department undertake a bacteriological examination of the sputum for diagnosis in every case of pulmonary disease of doubtful character in private dwellings, boarding houses or tenement houses, with a physician in attendance who desires that this should be done. This procedure to be carried out with a view of obtaining definite knowledge upon which the proper sanitary surveillance of those suffering from tuberculosis can be based.

Seventh—That all physicians practising their profession in this city be required to notify this Board of all cases of pulmonary tuberculosis coming under their professional care.

For the proper performance of the preliminary work, as detailed above, a special corps of medical inspectors has been provided, whose duties are entirely confined to the work connected with the investigation of the disease and the carrying out of the means for its prevention.

The registry is made complete by platting all cases on a series of maps which cover the whole of Manhattan Island. There are 110 of these maps, bound in atlas form. They are made under the direction of the department, and each one, three by two feet in size, is drawn to a scale of 100 feet to an inch. This scale is large enough to show every house lot in the city by an area in which can be platted forty cases of tuberculosis. The maps are so arranged that they represent the sanitary districts of the United States census of 1890. These districts are supposed to contain a more or less homogeneous population. The entry of cases is made by conventional signs, which indicate the month and year of report, and whether the case is living or dead. It is believed that such a systematic study of the history of infected spots as can eventually be made from these maps will hardly fail to aid greatly in our knowledge of the methods of extension of tuberculosis and the methods required for its repression.

With certain exceptions, such as patients under the care of private physicians, all reported cases, living or dead, are assigned to the medical inspectors of tuberculosis for the district from which the cases are reported. The inspector visits the address given, and, if the patient is living, leaves a circular of information and gives verbal instruction to the friends about the danger of infection and the care of the sputum. If the address is that of a dead patient or if the patient, though living, has moved, the inspector examines the premises and makes such recommendations as seem to him necessary to render the habitation free from danger of infection. These recommendations, made out of a prescribed form, usually advise the following routine treatment of apartments: Kalsomined or whitewashed walls or ceilings are washed with a solution of washing soda (one-half pound to three gallons of hot water), and then kalsomined or whitewashed again; paper walls or ceilings are similarly washed and are prepared; the woodwork is scrubbed with the soda solution and repainted.

The inspector's recommendations are forwarded to the Board, and on them as a basis a ten-day order is issued on the landlord, requiring him to carry out the specified renovation. The execution of the order is then (as with all orders of the Board) placed under the supervision of the sanitary police. The premises are reinspected, and if at the expiration of ten days the owner has not complied with the order it is referred to the attorney of the Board for enforcement. This procedure was determined upon because of the difficulty of disinfection of apartments in which cases of tuberculosis have been, and the greater efficiency attained by the system of renovation. The Health Department, moreover, is relieved of much labor and expense. The method is easy of enforcement, as is shown by the fact that compliance with the order has not been refused in a single case.

The chief point of interest in this plan is that renovation rather than disinfection is called for. Disinfection involves the use of materials and methods which are not universally familiar. The method of renovating required is understood by all, and is more efficient than any method of disinfection which could be employed; and, finally, disinfection often leaves the apartment in an undesirable condition, while renovation is, of course, always appreciated by the tenant. It is in line with this policy that soda solutions are advised for use instead of sublimate solutions, and is familiarly known as such.