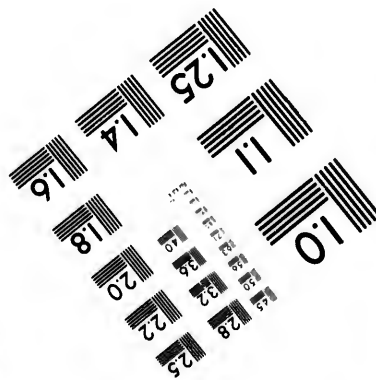
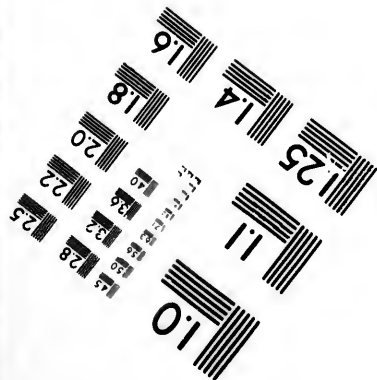
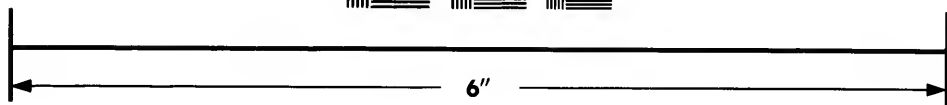
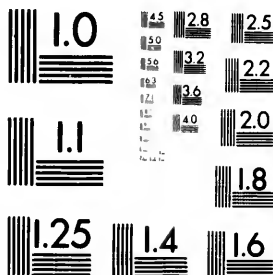


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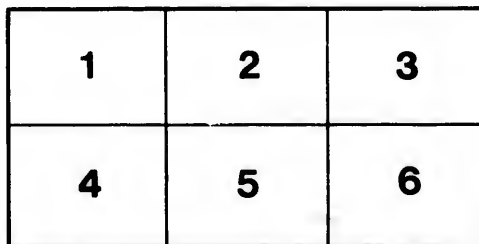
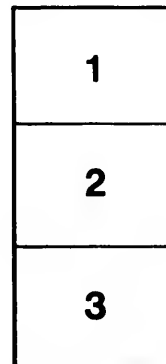
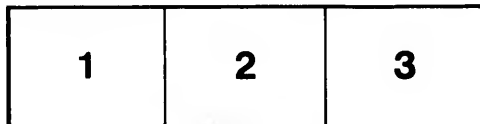
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OUR RACE AND CONSUMPTIVES.*

SIR JAMES GRANT, K.C.M.G., M.D.

Consulting Physician to Their Excellencies, Lord and Lady Minto;
Consultant to the General Hospital, Water Street and
St. Luke's Hospitals.

OTTAWA.

The great problem staring us in the face is, What course of action is most judicious to stay the spread of consumption? So alarming are the present results, that conferences on this subject are being held in most of the enlightened centers of the world.

History points out that no race of human kind has yet obtained a permanent foothold on this continent. The Asiatics trace back their life history so far that it is like a geologic epoch. Those who descended from the Ptolemies are still found cultivating the rich alluvial banks of the Nile. The race that peopled Northern Europe when Greece and Rome were in their infancy still retains its hold, and exercises a powerful influence throughout the world.

An important fact, and one worthy of consideration, is, that races have been born on this continent, lived and entirely disappeared, leaving as records of their past history mounds in the West, vestiges in Florida, and traces in other directions, which give an undoubted indication of at least two extinct races. Thus far the information is wanting, which would clear up the causes why these races have entirely disappeared. It now remains to be seen if the Anglo-Saxon race will prove itself equal to the occasion and be more fortunate in establishing a lasting foothold on this continent. Climate

* Read before the Canadian Medical Association, September, 1900.

and civilization require a physique and brain-power equal to the occasion to meet successfully the trying demands of the present age.

The enthusiasm of the Canadian people in assisting in the protection of British interests in South Africa was placed beyond doubt by the rapid equipment of fully 3000 men, who entered the field, and displayed bravery not surpassed in the history of the Empire. As a result many valuable lives have been lost, by the sword and disease; but it is most appalling to reflect on the fact that over 3000 deaths by consumption were recorded in the fair province of Ontario in 1898, and yet our people are not aroused to this great fatality, now assuming such alarming proportions. The seeds of this disease lurk in our country, in our homes, in our places of business, in the food we eat, in the water and the milk we drink, and in the air we breathe, spreading disease, fatal in its results, and producing a most disastrous influence on the present generation.

As a profession, it is our duty to guide and direct public opinion as far as possible, in order to place the whole subject in a clear and comprehensive form, so that common-sense co-operation may be aroused, and an active interest taken by all classes of the community, to stay, as far as possible, the alarming spread of consumption, the "white plague."

For many years medical opinion was divided as to the communicability of tuberculosis, but we are all contagionists now, since the remarkable discovery of Dr. Koch, in 1882, that consumption of the lungs is caused by the introduction of a living germ, the bacillus tuberculosis, into the system of a previously healthy person. To-day his theory that tuberculosis is a *communicable* and *preventable* disease is accepted and verified, two facts which can not be too strongly impressed on the public mind. Heredity was the accepted opinion for many years, exercising a soothing influence on some by the prospect of escape from consumption. Nothing is more certain or conclusive than that no one does, or can, inherit consumption. The offspring of consumptive parents receive the infection from without, before they can become consumptives, thus giving fresh hope and spirit to the parents known to be consumptive.

In 1888 and 1890 two British Royal Commissions were appointed to make investigations in regard to tuberculosis, and the result of their deliberations was as follows:

1. Consumption is a contagious disease.
2. Contagion is in the form of a living germ.
3. This living germ can grow and propagate only in the body of man or some of the lower animals.
4. The principal source of infection is the dried sputa from the lungs of persons already suffering from the disease. The sputa becoming dry, the tubercle germs float as particles of dust in the air, and are thus inhaled.
5. The other source of infection to man is from eating the flesh and drinking the milk of tuberculous cattle. Cooked meat destroys infection, and is not as dangerous as raw milk containing tuberculous matter, and more particularly if the animal has well-defined, ulcerated udders.

Dr. Clifford Allbutt¹ has published the opinion, that there are instances of prolonged use of tuberculous milk by many persons, old and young, without ill consequences, and this immunity depends on the constancy of the defensive machinery of the body.

In 1896 a third British commission was appointed, composed of eminent medical men and veterinary surgeons, to inquire into the most advisable and desirable means for controlling the danger through the use of the meat and milk of tuberculous animals. "The housing and general sanitation of cattle require special care and attention. Tuberculin should be supplied free by government to all owners of cattle, so that their herds could be examined at stated intervals by the tuberculin test. The infected animals should be treated according to the most advanced principles, either by isolation or by killing. Local authorities ought to take samples of milk offered for sale within their districts, and vendors should be required to give information of the source from which the milk is supplied." These methods are now in force in England, to assist in stamping out "bovine tuberculosis," and protecting the public, as far as infection is concerned.

¹ British Med. Jour., Oct. 23, 1890.

The tuberculin test has been the subject of considerable controversy, and the following facts should be kept well in mind:

Dr. Watson², president of the State Board of Cattle Commissioners, Concord, N. H., states: "We believe that a majority of the cattle reacting to the tuberculin test are not diseased to an extent that requires their slaughter for the protection of the public health." The policy of slaughtering all animals that reacted on tuberculin has been entirely abandoned, as, after the most careful inquiry, it is believed that a majority of the cattle reacted on by the tuberculin test are not diseased to an extent that requires their slaughter for the protection of the public health. Much depends on the careful and thorough examination by skilled veterinary surgeons, as thus the danger of infection from either tuberculous meat or milk would be reduced to a minimum.

Tuberculin does not reveal the degree of infection and is not as reliable a test as was at first supposed. Solomon, in 1893, admitted³ that tuberculin was a great aid to diagnosis of tuberculosis, but not infallible, and might lead to errors. There are instances on record in which tuberculosis existed and the animals did not react to tuberculin. In all such investigations, in order to promote health in cattle as well as man, the opinion arrived at by the highest authority is, that sanitation ranks first. Dairymen should be registered, and an inspector appointed for a specific area of country, to be under the control of the local government or a provincial bureau of cattle commissioners, to make reports at stated intervals, as well as issue printed circular directions to dairymen, milk venders and cattle dealers, for their guidance and general direction, and all animals for food supply should be inspected before they are sold. Some such system carried into effect in Canada would reduce tuberculosis to a minimum, and do much to strengthen the belief that the Dominion is a center of health, happiness and prosperity. Too much stress can not be placed on these facts, in order that the public, as a whole, may be aroused to the great importance of a general knowledge of the subject, as such would in time give direction

² Public Health Report for 1898, Vol. xxiv, p. 149.

³ Trans. American Pub. Health Assn.

to governmental and special efforts of scientists, who should not be single-handed in public health efforts.

In May, 1900, the regius professors of Oxford and Cambridge spoke with all the responsibility of their office, on the communicability of consumption and its prevention, fully impressed with the fact that from 65,000 to 70,000 die annually from the disease in Great Britain, more than double the fatality of the entire British force at present in South Africa.

Clifford Allbutt epitomized the preventive measures: an active crusade against the three D's—damp, darkness and dirt. In clearing the public of these evils, the standard of general health would be raised to a higher level, and what is needed in Canada is thorough organization.

At the last session of the legislature of Ontario a permissive bill was unanimously passed, the result of the labors of the Anti-Consumptive League, of Toronto, providing for the erection and maintenance of a sanatorium for consumptives in each municipality, or group of municipalities, in the Province of Ontario. This is a most progressive move, in keeping with the advancement of the day, and one which reflects much credit on the local authorities of Ontario.

The history of medical opinion as to the communicability of tuberculosis is somewhat remarkable. Villemin was ridiculed as to his ideas of infection, but we are all contagionists now, and Villemin's name stands out as one of the greatest men of his time, true scientist in the widest and most comprehensive sense.

Considering the antiquity of the belief of contagiousness of consumption, it is remarkable the length of time that elapsed before active measures were thought of to stay the progress of the disease. That consumption was contagious was known to Aristotle, who stated that the breath of consumptives was poisonous to those about them. In the second century, Galen announced the same idea, and warned the people that it was dangerous to live intimately with sufferers from consumption. In the fifteenth and sixteenth centuries, Baillon, a celebrated French physician, and Montano observed the frequency of consumption in those who attended phthisical patients. In 1682 the celebrated Morgagni expressed the same opinion. At Nancy, in 1750, the fur-

niture of a woman who died of consumption was publicly burnt by order of the magistrates. In 1754 the Grand Duke of Tuscany sought council from the Florence College of Physicians as to the infectiousness of consumption, and a legislative enactment for the prevention of consumption was issued in 1782 by Frederick IV., King of Naples. Thus, in the medical history of Europe we are enabled by records to trace very marked activity in the line of defense against the infectious character of consumption.

The one great source of contagion is the sputum of the consumptive patient, and particularly in its dried state. Fortunately, all those who inhale or ingest tubercle germs do not contract consumption. Much depends on a lowered state of the system, rendering it fit soil for its development. The surroundings of the individual limit greatly the infectious character of this disease. Much of the immunity from consumption depends on the care, prudence, and watchfulness exercised to promote a healthy state of the system, and to counteract any disposition toward a lowering of normal vitality, by careful observation and action, both as to external conditions or surroundings and the internal workings of the system, the very fortifications set up by nature to guide, direct, and preserve health.

All interested in tuberculosis should be alive to the fact that it is a preventable disease, and as a most desirable precaution against its spread, those laboring under the disease should use a metal sputum cup, which, with contents, can be thoroughly boiled, and thus act against infection. Strict quarantine should be exercised against the importation of foreign consumptives. Connecticut Medical Society Report, 1899, states:

"Every building where large gatherings frequent becomes a source of danger, unless precautions are used, for where can a large gathering be found that some consumptive does not frequent? Theaters, churches, school-rooms, with vitiated air and packed doors, our homes where consumptives live, the mill, the office, the sleeping car, hotels and cottages, in all health resorts where consumptives congregate, and even the public telephone and drinking cup, may become sources of infection."

Ship-owners should be careful that berths holding several passengers should not have even one of these

consumptives. Once our people are aroused to the fact that thousands die annually who might have been saved by preventable means, then timely care will be taken, and the necessary measures carried out, to reduce the death-rate to the smallest margin possible.

As to the medical treatment, the opinion now prevails that we have no specific for consumption. Dr. Bodington, of Sutton Coldfield, England, was the first to advocate the open-air treatment of consumption, and in this line of action Dr. Henry Bennet, Edinburgh, advocated vigorously the open-air treatment in the Riviera. To the fresh-air life, liberal feeding was added, the free administration of cod-liver oil, and in this, Hughs-Bennet was quite noted.

The Adirondack cottage sanatorium for the treatment of incipient pulmonary tuberculosis, under Dr. Trudeau, has accomplished much good and practical work. In round numbers, the result from all sanatorium treatment is estimated at about one-third cured of those who remained a reasonable term, from three to nine months; and what can be more satisfactory than the fact that absolute cures do occur?

Marked increased activity is evident by the congresses held in various parts of the world. Last year Berlin had a most successful meeting, at which Canada was represented by Dr. Farrel, of Halifax, to whom we are indebted for an excellent report. This year Naples has done likewise, and next year a congress will be held in London, under the presidency of H. R. H. the Prince of Wales.

If we inquire into the practical outcome so far, we will find that many able speeches have been delivered, much enthusiasm excited, resolutions passed, associations formed, and the state called on to provide the requisite machinery for carrying out the necessary sanitary measures. Lord Salisbury in 1898 said: "You must be content with preaching the salutary doctrine you hold, and must not think of applying it with the secular arm." So now, in England, the protection of the people, in these matters of health, actually rests with the municipal and local authorities. In Italy, fortunately, matters are somewhat different. Professor Baccelli, who is also an authority, as statesman and scientist, and as president of the Congress at Naples, an-

nounced that the Italian government prepared a law concerning the prophylaxis of infectious diseases, in which tuberculosis figures conspicuously. Persuasion alone is not sufficient, but compulsion must be used. We shall look forward with much interest to the outcome of this progressive measure, under the guidance of so eminent an authority. The education of our people in methods necessary to counteract the spread of tuberculosis would assist materially all other efforts in the same direction. Efforts should be made by the school, the church, the councils, and in every way possible, to inform the masses as to the vast moment of this serious malady, and as to the manner in which their united cooperation would prove of service.

Tuberculosis has become a really national disease, and is widely spread. The Provincial Bureau of Public Health doubtless will have an increased appropriation and additional special experts on this disease, that every means should be taken to stay the progress of tuberculosis, without which our efforts would be futile and the results anything but satisfactory.

A central bureau of health can not be thoroughly equipped without a chemical and bacteriological laboratory. Such are indispensable in the present advanced state of science.

The Dominion of Canada indicates a vigorous and healthy growth in this direction. Meetings like the present tend to strengthen and develop the power of public opinion in aid of the cause of science, and we trust that by judicious enterprise and intelligent energy the practical result will be that the soil and bacilli of tuberculosis will rapidly disappear.

150 Elgin Street, Ottawa.



