

CANADIAN OUT-DOOR LIFE.

A MAGAZINE DEVOTED TO THE GOSPEL OF OUT-DOOR LIFE
IN THE TREATMENT OF TUBERCULOSIS, AND THE VALUE
OF FRESH AIR AND HYGIENIC LIVING FOR EVERYONE

VOL. I

TORONTO, CAN., AUGUST-SEPTEMBER, 1907.

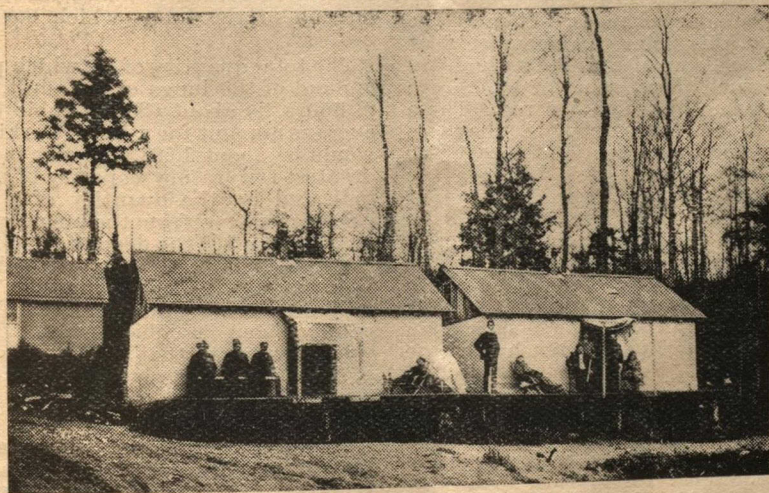
NO. 10

Fresh Air—Why, When, Where, How?

By W. J. DOBBIE, M.A., M.D.C.M., Physician-in-Chief, Toronto Free Hospital for Consumptives, and King Edward Sanatorium for Consumptives.

ALL modern methods in the treatment and prevention of tuberculosis include as one of the most important factors an abundant and constant supply of fresh air. People everywhere are beginning to believe in, and patients to practice, the doctrine of fresh air and the out door life. And yet it is probably true that but very few of those who so believe or practice could give any very intelligent reasons for so doing. And yet the matter is so simple and so easily understood by even those who are least initiated into the mysteries of medical science that it needs but to be explained in order to be readily appreciated.

gen and (2) the removal from the body of the necessary amount of carbonic acid. The former commodity constitutes one important item of the body's income, while the latter constitutes on the other hand one important item of the body's waste. And for all practical purposes it may be considered that the lungs are the organs concerned in this interchange of gases between the external air on the one hand and the blood on the other, although at the same time it is well to remember that there are reasons for thinking that oxygen can be taken into the blood to a certain small extent, through the skin, and also from the alimentary canal, and that likewise carbonic acid can be eliminated



LIVING THE OUT-DOOR LIFE: SHACK LIFE AT MUSKOKA FREE HOSPITAL FOR CONSUMPTIVES.

The whole mechanism of respiration has for its object two things, (1) the supplying of the body with the necessary amount of oxy-

from the skin and through the various secretions as well as from the lungs.

Now in respiration there are two processes, *inspiration* and *expiration*. In the former by the contraction of certain muscles the cavity of the chest becomes enlarged. This causes the pressure of the air in the little air sacs of the lungs to become less than that of the air outside the body. As a result there is a rush of air through the windpipe into the lungs until the pressure inside and outside is equalized. On expiration the muscles which previously acted are relaxed, and the natural elasticity of the chest wall and air cells, aided also by the contraction of certain muscles, causes the chest to return to its former size and so forces the air out through the windpipe. The air taken in on inspiration contains oxygen, but the air given out on expiration contains carbonic acid. The process by which the interchange is made is at the same time a very simple and a very interesting one.

The walls of the air sacs of the lungs are surrounded by small blood vessels in such a manner that the blood in these vessels is separated from the air in the air sacs by but a very thin wall. Through this wall the oxygen of the air passes from the air sacs to the blood in the blood vessels, and through this wall also the carbonic acid of the blood passes from the blood in the blood vessels to the air in the air sacs.

We thus see that the air in passing into and out of the lungs is, on the one hand, robbed of a portion of its oxygen, and, on the other, loaded with a certain quantity of carbonic acid. The blood too, as it passes along the blood vessels, arteries and veins, undergoes similar changes. It may be necessary at this point to remember that the blood is made up of a fluid, in which are suspended small discs, some of which are white and some of which are red. These red discs, or red corpuscles, as they are called, have for their function the carrying of oxygen and carbonic acid between the lungs and the tissues. Beginning, say, at the air sacs of the lungs, we found that the oxygen of the air in the air sacs passed through a thin wall so as to get into the blood. In reality the oxygen passes into the red corpuscles of the blood. These when loaded float along in the blood stream in the arteries until they reach a tissue requiring oxygen. Here by a similar process of diffusion their load of oxygen is given up to the tissue which requires it for food, and a load of carbonic acid, or waste matter, is taken up by these same red corpuscles from the tissues. With this return load they float along the blood stream in the veins until the lungs are again reached. Here they unload their carbonic acid as before described, and take up a new load of oxygen, to be similarly disposed of.

Now of course without oxygen the tissues of the body cannot live. The sole source of supply of oxygen is the external atmosphere which we breathe. The method of obtain-

ing the necessary oxygen is as described. But the atmosphere does not consist of pure oxygen. Pure air is a mixture of oxygen, nitrogen, carbonic acid, water vapor, and traces of ammonia, sulphuretted hydrogen, etc. In one hundred volumes of pure air there would be but twenty-one of oxygen. So that it will readily be understood that even in health it is advisable to breathe pure air so that the work of the red blood corpuscles in carrying the requisite amount of oxygen to the tissues may be as easy as possible. Because if the air is not pure it is more difficult for the red blood corpuscles (1) to secure their usual load of oxygen and (2) to unload their cargo of carbonic acid. This is true because if the air which is breathed has been previously loaded with carbonic acid, as is usually the case when the air is impure, it will not take up from the red blood corpuscles their store of that gas, and so they are unable on their return journey to take as much oxygen as would otherwise be possible.

If then the breathing of pure air is advisable under ordinary conditions of health, how much more is it essential in disease of any kind, where there is so much more waste matter to be eliminated and so much more need for oxygen. And how reasonable it seems that pure air should be particularly valuable in disease of the lungs where there is not only all the extra demands made by the disease itself but where also the main mechanism for performing the important function of respiration is itself disabled, and the whole burden becomes thrown on that portion of the lungs which has remained healthy.

The total quantity of air which passes into and out of the lungs of an adult, at rest, in 24 hours, is about 686,000 cubic inches; the average amount for a hard working laborer would be about 1,568,390 cubic inches. The greatest respiratory capacity of the chest is indicated by the quantity of air which a person can expel from the lungs by a forcible expiration after the deepest inspiration. It may be given as about 225 cubic inches. The amount of air, however, which is uniformly changed in each act of breathing is only about 30 cubic inches. In this way we can estimate that about 13 cubic inches of carbonic acid is given off in each respiration, and about 14 cubic inches of oxygen taken in.

And in order that provision may be made for a constant supply of fresh air, and the removal of that which has become impure, not less than 2000 cubic feet per head should be allowed in sleeping apartments, and even with this allowance the air can only be maintained at the proper standard of purity by a system of ventilation which supplies 2000 cubic feet of fresh air per head per hour.

It is desirable therefore not only in health, but also in case of disease of any kind that

an adequate supply of pure air should be available. The air of enclosed spaces, thickly populated districts, or densely inhabited rooms is of necessity less pure than that of localities and dwelling places not so characterized. The pure air should be available continuously. In every case the patient should spend as much time as possible out of doors, and a locality should be selected which makes such a procedure practicable. Cold, rain, snow and wind should not prevent the enjoyment of the open air because it is usually a simple matter to provide a shelter from these disagreeable elements.

A great deal of unprofitable discussion has been indulged in on the question as to what climates are most suitable for the patient suffering from Tuberculosis. The discussion is unprofitable if for no other reason than as a rule patients are not in a position to avail themselves, while taking the cure, of any particular climate that might be selected as the most suitable, nor are they able as a rule after being cured to make their permanent abode in any climate than the one in which their friends and earthly belongings are situated. But as to the merits of the question itself there is little to be said. The question to be decided is as to what atmospheric conditions are most favorable for the elimination of carbonic acid and the absorption of oxygen by the lungs. Observations which have been made go to show that within the range of 38° F. and 75° F. every rise equal to 10° F. causes a diminution of about two cubic inches in the quantity of carbonic acid exhaled per minute. And this is in accord with the frequently observed fact that patients feel better in cooler weather. Likewise if the air which is breathed be impure and so previously impregnated with carbonic acid, the quantity of carbonic acid exhaled becomes much less. The amount of carbonic acid exhaled is also considerably influenced by the degree of moisture of the atmosphere, much more being given off when the air is

moist than when it is dry. It is an advantage of course to be free from mud and dust, and it is maintained that high altitudes are of some value since particles of dust fall more readily in rarefied air. In like manner numerous other arguments might be advanced in favor of or against this or that climate. The fact remains that the essential point to be considered is the amount of time which may be spent in the open air in any given climate, because the more the patient is confined within doors by mud, rain, storm, etc., the less benefit will he naturally derive.

Various forms of buildings such as shacks, roofed tents, etc., have been devised and constructed so as to make it possible for a patient to secure the maximum of fresh air with the minimum of discomfort. As a rule these consist of rain and storm proof structures, provided with large openings through which an adequate supply of fresh air is secured. The general style of such temporary quarters are showing in the following cuts:

But even when living in structures such as these, or even when in a tent it is necessary to attend carefully to ventilation, because a closed shack, or a closed tent is just as bad as a closed sleeping apartment of any other kind. Air does not readily pass through canvas as many people imagine. If it did, sails would in all probability be made of some other material.



TAKING THE "CURE" IN WINTER AT THE MUSKOKA COTTAGE SANATORIUM

But even when it is necessary to use an ordinary house much can be done to improve hygienic conditions. And this should be done as a matter of course even in health, because it is of importance that every sleeping room should be made as healthful a place as possible. For it is to be remembered that if a person spends but eight hours out of the twenty-four within doors, that in itself represents exactly one-third of a life time. The windows of every sleeping room should be so constructed that they may be opened to any desired extent. And no room should ever be used as a sleeping room unless the window is opened during the whole time the room is in use. In tuberculosis this should be an absolute rule in all seasons. Storm sash may be used but adequate provision should be made by an opening of considerable size for ventilation.

Sleeping out of doors is possible. It may or may not be advantageous. All depends on where the patient is going to sleep, and how the bed is arranged and the patient prepared. In spring, summer and autumn in this climate no great difficulties arise and no special preparations are necessary. In the winter, however, the proposition is a different one, and special provisions have to be made. The bed is not a very material consideration. The mattress, if of the best hair, will be warm enough in any weather. If of a cheaper kind it may be made so by spreading a layer of newspapers under it and a quilt or a blanket over it. The coverings should be light and warm, and the main idea should be to keep the clothes close around the patients, to prevent air from getting in at the shoulders. To do

this latter the pillows may be arranged in the shape of an inverted V thus Δ . Furthermore the patient should "dress for bed" as follows:— (1) night shirt, (2) sleeveless sweater, (3) knitted cap, (4) woollen dressing gown, (5) slumber socks.

But it is not necessary nor desirable that every patient should sleep out of doors. Some are disturbed by the light, the wind, change of temperature, etc. As a matter of fact, it is more necessary for those who are confined within doors during the day to sleep in the open at night than for those who are able to be out all day.

Much more might be said in connection with this subject. It presents many interesting points for consideration, but as a matter of fact the main features of the fresh air problem are the following:—

1. Fresh air is desirable and necessary in health as well as in disease.
2. Climate is an important consideration as a rule only in so far as it determines the amount of fresh air which can be obtained.
3. For all forms of indoor life adequate ventilation should be provided both day and night.
4. When an attempt is made to live or sleep out of doors in such a climate as this proper precautions should be taken to secure comfort for all parts of the body both day and night.
5. Houses, workshops, stores, schools and churches are seldom if ever properly ventilated, because it is cheaper to heat buildings in which the air is not changed frequently than it is to heat those in which the air is changed frequently.



GROUP OF BUILDINGS AT MUSKOKA FREE HOSPITAL FOR CONSUMPTIVES.

The Social Causes of Consumption

WHATEVER may be the real cause of consumption, there is no doubt that unfavorable economic conditions make humanity open to infection and contribute immensely to its spread. The following from a leading paper is very specially the concern of every man who, whether in individual or in corporate relations, has authority over his fellows:

"Toward what Waterloo is our boasted industrial progress hastening our social organization? What bleak rock, in what waste of waters, awaits our expiation?"

"This vast, inexorable machine that is grinding our fellows is no impersonal abstraction. It is the sum of its living units, by whose knowledge, consent and participation it acts. We are society—we, the well-fed and comfortable; we, who have intelligence to observe and time to reflect. What society does, we do."

Dr. S. S. Cohen is led to make these forceful queries when he contemplates the ravages of tuberculosis, which, he says, is ultimately a social question. For he declares in the *Saturday Evening Post* that: "To him who dares to look beneath the surface the answer to the Sphinx's riddle is plain. The poverty and the misery, the privations and the squalor, that makes men food for the bacillus tuberculosis to devour, can all be reduced in final analysis to two causes—high rents and low wages.

HIGH RENTS AND LOW WAGES

To what these are in turn to be attributed is for the sociologist and the economist to say, not the physician. The physician has fulfilled his duty when he points out that for the begetting of the child known as Tuberculosis two parents are required. Bacillus may be the father, but the mother is Poverty. Divorce the bacillus from Poverty and his monstrous child will not be conceived to prey upon man. The parents of Poverty, also, the physician names. High Rent is the father, Low Wages the mother; but these cannot be divorced—they are incestuous twins of one begetting. It is this begetting that the economist must discover and the statesman take measures to prevent. Not

the fallacious and abhorrent measures advocated by Socialism or Anarchism, but wise-broad, far-sighted measures, founded upon the preservation of individual rights; upon the protection of every man in his equality of opportunity, in his possession of the fruits of his toil.

"Nor is it for the sake of the very poor only that we must learn to prevent the conditions in which the infection of tuberculosis flourishes. They suffer the most, but others in all economic ranks are overworked and harassed and depressed by the same impersonal and merciless envelopment that produces the misery and squalor of the tenement dwellers and the fatigue and ill-nourishment of the factory hand and the shop girl. The small merchant, the banker, the manufacturer, the teacher, the writer, the minister, the lawyer and the doctor—the butcher, the baker, the candlestick-maker—all are driven physically or mentally at a pressure that must often cause breakdown. Or take the reverse side of the shield—the unearned wealth which represents the lack suffered by the victims of society, piling up in the coffers of its pampered pets, tempts to sloth, to over-indulgence, to dissipation, which can also break down the normal resistance. Thus, in diminishing degree, the disease penetrates upward and upward from the sunken base of society to the towering apex. The infection breeds in hovels, but ever and again it marches thence against the palaces, to avenge the sufferers of Lazarus upon the children of Dives.

600,000 CONSUMPTIVES IN U.S.A.

"In the United States," says Dr. Cohen, "there are 600,000 consumptives. Assuming that in only one-fifth of the cases are the patient, his friends and his family so poor that public benevolence is called upon to afford him the means of recovery, a very modest computation of the amount of money required to discharge this duty would be \$60,000,000 annually. The amount expended for this purpose, much as it has increased within the last ten years, and generous as it seems when viewed apart from the magnitude of the distress which it is intended to relieve, is less than one-twelfth of this sum."

Not a single applicant has ever been refused admission to the Muskoka Free Hospital for Consumptives because unable to pay. Money is urgently needed to extend and carry on this work.

The Work of 10 Years

WHAT CANADA IS DOING FOR HER CONSUMPTIVES

Muskoka Cottage Sanatorium

For Incipient Cases - - - - - Established 1896

Muskoka Free Hospital for Consumptives

For Incipient Cases - - - - - Established 1902

Toronto Free Hospital for Consumptives

For Advanced and Far-advanced Cases - - - - - Established 1904

King Edward Sanatorium for Consumptives

For Advanced and Far-advanced Cases - - - - - Established 1907

A Remarkable Quartette of Charities and Hospitals

Trustees National Sanitarium Association

Lord Strathcona and Mount Royal, Montreal, President; Sir William Ralph Meredith, Kt., Toronto, Vice-President; W. J. Gage, Esq., Toronto, Chairman of Executive Committee; Chester D. Massey, Esq., Toronto; James Ross, Esq., Montreal; Hon. Geo. A. Cox, Toronto; Hon. Geo. W. Ross, LL.D., Toronto; Edward Gurney, Esq., Toronto; Hugh Blain, Esq., Toronto; D. E. Thomson, Esq., K.C., Toronto; Mayor of Gravenhurst, Ont.; Hon. J. J. Foy, Toronto; Thomas Long, Esq., Toronto; J. J. Crabbe, Esq., Toronto; Hon. E. H. Bronson, Ottawa; R. Tasker Steele, Esq., Hamilton; Ambrose Kent, Esq., Toronto; T. H. Bull, Esq., Toronto; Dr. N. A. Powell, Toronto; Dr. W. P. Caven, Toronto.

Trustees Toronto Free Hospital for Consumptives and King Edward Sanatorium for Consumptives

W. J. Gage, Esq., Chairman of Trust; Hon. W. A. Charlton, 1st Vice-Chairman; H. P. Dwight, Esq., 2nd Vice-Chairman; H. C. Hammond, Esq., Treasurer; J. L. Hughes, Esq., Hon. Secretary; R. H. Davies, Esq.; Ambrose Kent, Esq.; W. Lloyd Wood, Esq.

The King Edward Sanatorium for Consumptives, so named by special permission of His Majesty King Edward VII, was officially opened by His Excellency Earl Grey, and Sir Wilfrid Laurier, Premier, on Wednesday, August 28th, 1907. Patients in advanced stages of Pulmonary Tuberculosis, from any part of Canada, accepted.



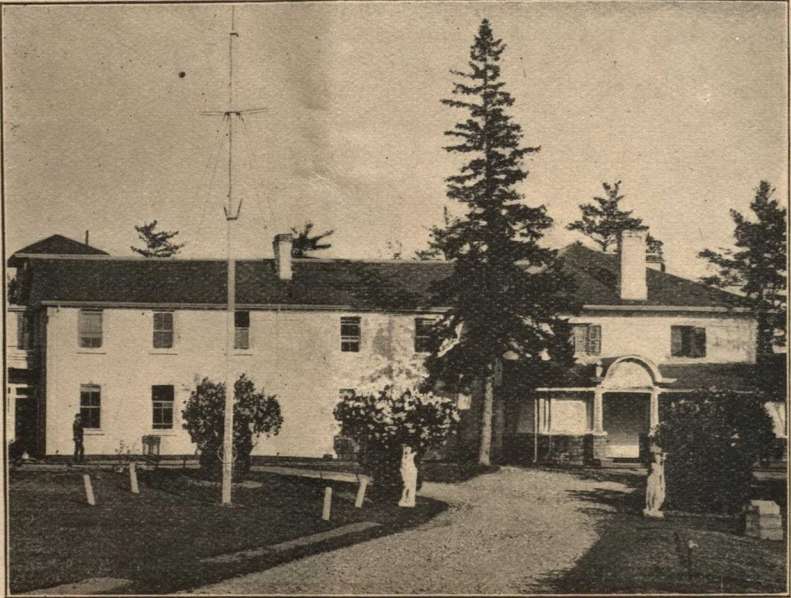
View of Administration Building, Muskoka Cottage Sanatorium, near Gravenhurst,
Showing in Part Near-by Cottages : For Incipient Cases : Established 1896

The Gift of W. J. Gage, Esq., and Hart A. Massey, Esq.

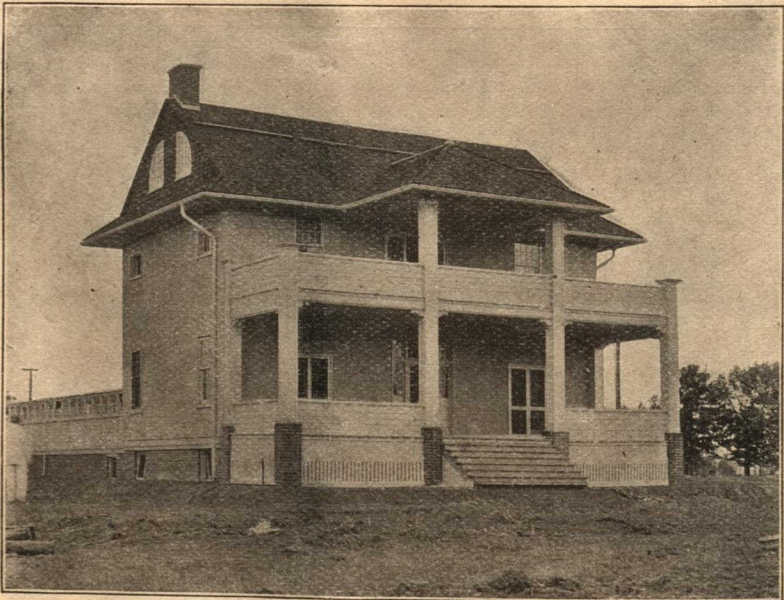


Administration Building, Muskoka Free Hospital for Consumptives, near Gravenhurst.
For Incipient Cases : : : : : ; : Established 1902

The Gift of W. J. Gage, Esq., and Hart A. Massey, Esq.

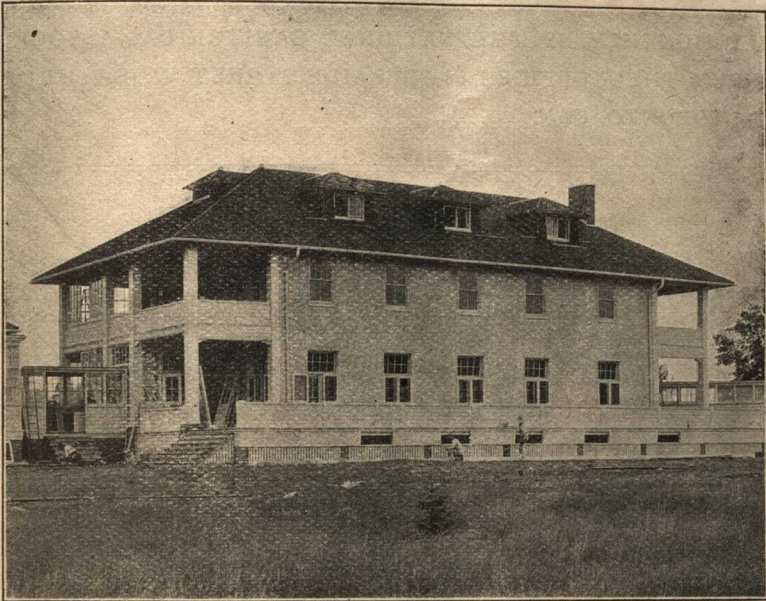


Administration Building, Toronto Free Hospital for Consumptives, near Toronto, Ont.
 For Advanced Cases : : : : : Established 1904



Administration Building, King Edward Sanatorium for Consumptives, by Special
 Permission of His Majesty King Edward VII. For Advanced Cases. Established 1907.

The Gift of H. C. Hammond, Esq.



The Mullholland Cottage for Patients at King Edward Sanatorium for Consumptives.
For Advanced Cases. The Gift of Robert Mullholland, Esq.

All information regarding the Muskoka or Toronto Institutions, and applications for admission, should be addressed to J. S. Robertson, Secretary, 28 Adelaide Street West, Toronto, Can.

Sir W. H. Broadbent, M.D., M.R.S., Physician-in-ordinary to H. M. the King (lately deceased) having visited the Toronto Free Hospital for Consumptives, wrote a special article for the British Medical Journal, in which he said:—

“This hospital for advanced and far-advanced consumptives in Toronto, is the first which, so far as I am aware, has been erected purely and simply with a view to prevention. I do not know who is to be credited with the idea, whether lay or medical, but I regard it as a fine instance of Canadian common sense and foresight.”

CANADIAN OUT-DOOR LIFE.

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28 ADELAIDE ST. WEST (Saturday Night Building) - - TORONTO, CAN.

The "Lancet" asks for Clean Clothes

"THE recent honour bestowed upon one who has devoted so many years of unselfish service to those 'who have none to help them' was an act of grace which all will approve, but," says the *Lancet*, "we appeal for the elimination of the word 'ragged' from the official vocabulary.

"To speak plainly, we as a nation should be advanced beyond ragged clothes and dirty bodies, yet unfortunately this is a consummation which every thinking observer must admit we have not reached. It is true that, speaking generally, business men, clerks, shop attendants, and others of this class are well dressed, and present, as a rule, a neat and attractive appearance which gains approval, but the condition of the working class is nearly always deplorable, and what a contrast does the clever artisan present with his white apron and sleeves rolled up, hard at work: he seems to be the very embodiment of labour triumphant.

"In the street, however, the same man appears in disreputable garments, an old hat, a seedy coat, completely reversing the spectacle of a neat and tidily clothed person as he is when engaged at his work. Surely there must be something wrong here; an ill-dressed man is depressed, an ill-dressed woman demoralized. Employers might do much to encourage their workers to leave their occupations clean and tidy, and every facility should be afforded to them in the shape of bath and dressing-rooms of doing so. Quite good clothing can be had cheaply enough, and so can soap and water, and these are elements which a man should use to make himself a pleasure to himself and, need it be added, to others also."

Let us add to the words of the *Lancet* that these elements should also be used very specially in warding off disease, if the view of Dr. Hessen, as the result of his researches, be correct, that the real cause of consumption is "the checking of the purifying function of the pores of the body."

SICK AND MONEY ALL GONE

REV. W. R. JOHNSTON, Pastor Church of England, Killarney, Man.: There is a young man here by the name of Thomas who is suffering from consumption. He came to this country from England a year ago last June and has been working on a farm until the beginning of this winter when he had to give up through failing strength. His money is all gone and he is owing a board bill since Jan. 1st. It seems foolish for him to stay where he is, but he is not able to go anywhere for treatment without funds. Our church is taking steps to help him, but it seems to me it would be more practical if the money raised for him could send him to some institution like yours where there is hope of him being permanently cured. So I am writing to ask if we send him down to you will you take him in. Hoping for a favorable reply I beg to remain.

The Main Thing is Not to Worry

It is worry that makes people old before their time; worry brings about the greatest unhappiness and misery in the world; the things we worry most about are the things which do not happen; when trouble comes it is generally from the quite unexpected quarter. All sorts of treatises have been written on worry. It ruins digestion, produces bad temper, and not infrequently makes the victim thoroughly and really ill. Eliminate unnecessary worry from the world and the happiness of humankind would be doubled immediately.

An English specialist says worry is not a cause, but a symptom; in other words, when we worry we are diseased. Physiologists call the poison which brings self-worry, auto-intoxication, and explain it in the following way :

The body, in a regular part of its work, secretes poison which, if developed in large enough quantities, produces disease and death. A German investigator, Dr. Weishardt, experimenting on guinea pigs, found when they were put on a treadmill and forced to run until they dropped dead from exhaustion, a highly poisonous sap might be pressed from their muscles, and if this sap was injected into the veins of a healthy guinea pig, it would produce immediately all the symptoms of an extreme fatigue, and at the end of a short time it would die. The sap from the muscles of a pig that was not worked to death had no such effect.

The same principle applies to human bodies. When persons over-exert themselves physically, mentally or emotionally, it stimulates in the system these poisonous growths. Under a normal load, the body

gets rid of them in a good night's sleep.

The schoolboy or girl who spends two hours in the afternoon playing baseball, tennis or riding a bicycle, or the business man who plays eighteen holes of golf, does not worry very much that evening; the poisons in the system are oxidized and pass away. Business anxieties, disease, home troubles, fear of punishment in the next world for our sins, or depression after an unsuccessful venture, are the things we worry about, but if we were normal in health they would not make us despondent and bring on sickness. When we worry inordinately, we are either working too hard or going the pace too fast, the result being to depress the normal activity of the body, often doing more damage than if we were attacked by a specific disease.

The soldier facing a battle, with eternity, perhaps, before him the next day, rarely worries over it. Activity and an outdoor life give him a healthy body and a healthy mind, and enable him, like every other healthy animal, to face things with the philosophy that comes with perfect health. There is less worry in the homes of the poor than in those of the rich, for the poor have to hustle to keep alive, and the hustle brings health.

In the olden times people were afraid that the sky would fall on them, and every lightning flash or thunder clap was a sign that the invisible powers of evil were conspiring against them. We have gotten away from those superstitious days, but most of our worries of to-day are quite as senseless. When we worry we are unwell, and when we are unwell we need attention and care.

The main thing is not to worry.

POOR GIRL WITHOUT A HOME

J. E. MURPHY, M.D., Pakenham, Ont.:—I wish to send to your institution a poor girl who is not very far advanced with tuberculosis. Kindly send me necessary papers and when you can admit her. The patient is a poor Home girl without friends or means and I hope you will try and make room for her.

IN YOUR WILL

Remember the National Sanitarium Association, organized for the benefit of consumptives. The Association can legally receive any sum which may be given or bequeathed. The following form will serve :

I give, devise and bequeath to the NATIONAL SANITARIUM ASSOCIATION, in trust, to be applied to the Muskoka Free Hospital for Consumptives, the sum of \$.....

Why Not Abolish the Cow Shed?

THE campaign against the white plague depends on not a few conditions in order to success. Evidently one of these factors is to guard against infection from tuberculous cattle. The cowshed animals that breathe air from the adjoining square, into which vile filth and infected refuse are cast, are "driven from pillar to post all over the country to cattle markets, where they may or may not be sold, often spreading disease on the track and conveying disease to others."

Lady Priestley has a remarkable article in the *Nineteenth Century*, in which she points out how the so-called picturesque cowshed may be a mere haunt of death for town folks, and favors its abolition.

She is writing on "The Homes of our Food Supply," and has in mind that the Commission on Tuberculosis proved that severe and even fatal disease can be, and frequently is, caused in human beings by Koch's own so-called bovine tubercle bacillus.

THE TALE OF SCIENCE

"With the key to knowledge in our hands the subject of health has taken a prominent place in the minds of all educated and thinking human beings, with the result that medical men have risen in public estimation, and that health societies have been established everywhere, forming as it were links between the great centres of research and the legislators of our country. Still," says Lady Priestley, "we have only to look at the farms all over Great Britain and Ireland to see for ourselves that they have never changed, and remain to-day what they have ever been, Acts of Parliament, orders, and regulations notwithstanding.

"We know that some model farms and model dairies exist, but when we consider that every house in the kingdom requires its complement of milk delivered daily, we have only to reflect in order to know that it must come from all quarters promiscuously. Owing to long-established custom we have come to regard our farmsteads as picturesque objects in the landscape planted there by Nature for artists to paint wherewithal to delight the eye; the pictures being handed down from generation to generation as works of art. But where Art is dumb, Science steps in behind those pastoral scenes, and tells the tale of cattle bred in disease, grazed on contaminated pastures, housed within walls saturated with centuries of disease germs, denied the sunlight which might neutralize much, and condemned within the settable walls to breathe air from the square into which all filth and infected excreta are thrown and collected to form 'plant food' for the fields.

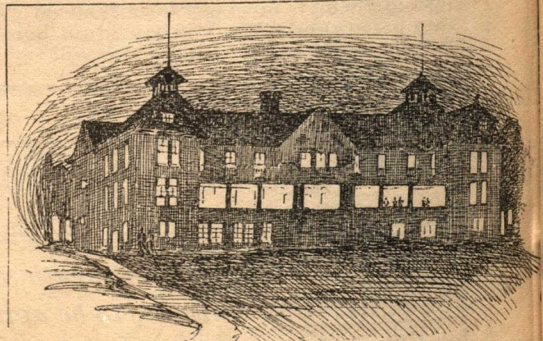
DISEASED CATTLE

"The animals nurtured in these surroundings are driven from pillar to post all over

the country to cattle-markets where they may or may not be sold, often spreading disease on the track and conveying disease to others. Some are bought by the butchers for human consumption, and have to run the gauntlet of inspection in our great cities at the abattoirs, but in little country districts escape from lawful supervision is not altogether impossible.

"Others are bought for breeding purposes, and when calves are born they are usually separated from their mothers, who moan and weep as did Rachel for her children; but the farmer is inexorable: he has to make his profit out of the milk while it is plentiful, and the unhappy offspring have to endure semi-starvation on diluted or skim milk until turned into the fields to fend for themselves. In common with many human infants who are denied their mothers at this critical period of their lives, they simply scrape through to join the ranks of a deteriorated race, and give birth in due course to others. Thus history repeats itself, and yet all the while enlightened men are rising up amongst us to consider what can be done to save infant mortality, and improve the human race!

"The careful precautions adopted by the Commissioners to obtain only healthy cattle for their experiment, show," says Lady Priestley, "that they were fully aware of the enormous number of tuberculous animals in this country, and their statements as to the value of tuberculin test as a means of diagnosis prove its reliability and importance. It requires no great effort of imagination to see that within a short time the testing with tuberculin of all cows supplying milk will possibly be made compulsory by law, for the Commissioners insist that the proper carrying out of the test is essential to its accuracy. The means they adopted with their own animals are further detailed in the Report, and this is open to all.



NIGHT VIEW MUSKOKA FREE HOSPITAL FOR CONSUMPTIVES

OPEN AIR FOR COWS

"To do any practical good we must go to the fountain head, the farm, and establish properly qualified veterinary surgeons to examine the cattle with tuberculin and separate the healthy from the unhealthy, and, further, to start fresh breeds in sound and sanitary conditions. Many experienced authorities are in favor of dispensing with byres and cow sheds, leaving the cattle to enjoy the privilege of open air summer and winter, day and night. Open sheds might be erected for shelter in bad weather, but if turned out in summer they soon become accustomed to the changes of season. In fact, one farmer who has already adopted the open-air treatment asserts that he has

found no harm come even when a calf is born out in the field during pouring rain. It is found that the first year the cows give less milk, but subsequently, when nature has provided them with thicker coats, they bear the cold remarkably well, and yield more milk as they get harder.

"It is scarcely to be expected that the humble farmer could grapple with the intricacies of science, but it would be something gained if he were made to realize at last that cleanliness paid better than dirt, and that obedience to modern laws brought better returns and fewer losses than holding to the traditions of his forefathers and centuries of death-dealing ignorance.

The extent to which needy patients can be cared for at the Muskoka Free Hospital for Consumptives is limited only by the givings of the people. The bank account is today heavily overdrawn. Contributions may be sent to Sir Wm. R. Meredith, Kt., Osgoode Hall, Toronto, or W. J. Gage, Esq., 84 Spadina Ave.

CONSUMPTION

Its Relation to Man and His Civilization.—Its Prevention and Cure.

BY JOHN BESSNER HUBER, A.M., M.D.

THIS BOOK, as its title denotes, is a comprehensive exposition of the effect which consumption has had upon civilization, and a consideration of its relation to human affairs. The scope of the work is wider than that of a medical treatise. It is essential that the subject of the disease most destructive to the human race should be viewed broadly. Medical science cannot cope alone and unaided with this difficult and prodigious world-problem: many forces economic, legislative, sociological, humanitarian—must be enlisted. For this reason the book is addressed to both physician and layman.

To those connected with or interested in Hospitals, Sanatoria and Camps, this book will be of the greatest value. It is safe to say that in no other volume will the same amount of helpful information be found. Besides containing an enormous amount of general information on the subject of tuberculosis, there will be found chapters devoted to the principal American Sanatoria; to those of England, France, Austria, Switzerland, and Germany; and to such subjects as Hospitals and Homes for Advanced Consumptives, Farm and Open-Air Colonies, Tuberculosis in Insane Asylums, Tuberculosis in Prisons, the Financing of the Tuberculosis Situation, Tents and Temporary Structures, and Rules of Treatment.

The subject is treated under the following headings:—

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FORWARD STEP

IN THE INTERESTS OF

Muskoka Free Hospital for Consumptives

The growing interest in the out-door treatment of tuberculosis makes the present time opportune for the publication of a journal devoted to the gospel of fresh air.

The National Sanitarium Association has led in the building of Sanatoria for Consumptives in Canada.

In educational propaganda it has ever been in the fore.

The Tuberculosis Exhibition held in Toronto for two weeks during the past year, and that created widespread interest among the medical profession and laymen, was brought here on the direct initiative of the National Sanitarium Association, and all expense was borne by this Association.

With this record for aggressive work in the interests of the consumptives of Canada it is, perhaps, natural that the N. S. A. should take the further forward and important step indicated in the publication of a monthly magazine devoted to the advocacy of these ends.

And here is the CANADIAN OUT-DOOR LIFE to fulfil this mission. Are we to have your aid? Are we to count you a subscriber now?

One dollar contributed to the funds of the Muskoka Free Hospital for Consumptives makes you a subscriber to CANADIAN OUT-DOOR LIFE for one year.

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Diseases Termed Dangerous

HENCEFORTH consumption is to be reported to the health authorities wherever it may be found within New York State. It is included in the list of diseases "dangerous to public health" which the State Board of Health promulgated to-day. Whooping cough is adopted in the same class. In many towns and cities consumption has been so classed for some years past, but not in all of them, as it was optional with the local health boards to require reports as they pleased. That in the crusade against this and other diseases it is a valuable factor to have a public record of cases that exist is generally conceded. The whole list of diseases placed in this class by the State Board of Health, under authority of an act passed by this year's Legislature, and reported to the State Board of Charity is as follows:

Actinomycosis, Asiatic cholera, cerebro-spinal meningitis, diphtheria, glanders, malignant pustule, measles, scarlet fever, smallpox, tuberculosis, typhoid fever, typhus fever, whooping cough, and yellow fever.

The above action by the State Board of Health, Mass., is a step in the right direction and is one that might be judiciously taken by the proper authorities in our province. But while this, by the engendering of a kind of panicky feeling among the people, might help to prevent the spreading of the disease, it would obviously add to the sufferings of the afflicted. These sufferers must be taken care of somehow, and this is best done in a sanatorium for consumptives. But this again means more generosity—more money—more hospital accommodation.

Texas Tuberculosis Regulations

A special from Houston, Tex., describing the rules issued by the State Board of Health to govern sanitation for tuberculosis, says:

"Tubercular victims are not allowed employment in any public building, in any school, church or bake shop or slaughter house. Burlap is prohibited for a floor covering; passengers on trains are not allowed to wash their teeth over wash basins, and careless handling of ice to be used in water coolers is made an offense.

"Floors of public buildings must be swept every day after being sprinkled with sawdust wet with formaldehyde.

"Boarding house, hotel and restaurant iceboxes must be scoured with acid once a week.

"In jail a prisoner must have 3,000 cubic feet of air an hour, walls must be white-washed every month and painted every six months."

The non-employment feature of these regulations is hard and drastic but not unreasonable. The sin comes in where no provision is made for the excluded victims of the malady. This sin can be avoided only by the organized effort of practical sympathy and capability.

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THE boarders were alarmed one night by what sounded like a man running at a tremendous gait in one of the upper rooms. However, as it came from the second floor front room of the new boarder, nothing was said.

The next night the same running noises were heard; still it was thought best to say nothing. But the third night the noise differed; the boarders huddled together in the drawing-room as the chandeliers shook, as the man above apparently came down at intervals with a thump, thump, that fairly shook the house.

"Two men were delegated to see what was the matter.

"What in the world is the matter up here?" asked one of the men as the door was opened by the new boarder, apparently breathless.

"Why," came the answer between gasps of breath, "I'm taking my medicine."

"Medicine?" echoed the men.

"Yes," said the man, as he dropped into a chair from sheer exhaustion. "It's tougher on me than it is on you. But the doctor said I should take it two nights running, and then skip the third night.—*Soldier.*"

Cure for Consumption

THE day was when there was little or no hope for the consumptive except on the part of the afflicted one himself or herself. Doubtless there were cases of cure when the disease was incipient and a change of circumstances for the better had fortunately or incidentally come about, or had been recommended and made. But systematic special effort was not existent as it is within recent years. After a long night of darkness the dawn has come in Canada within the last decade or so and is gradually advancing into day. The good effect has been already proved and is being steadily proven. Not to speak of beneficial results at Gravenhurst, the following good news comes from over the Atlantic:—

"The Belgium Sanatorium for Consumptives at Borgoumont claims nearly 85 per cent. of successful results."

Again,—“That tuberculosis in its early stages can be cured by fresh air, sunlight, and a graduated system of outdoor work is being demonstrated at the Brompton Hospital Sanatorium at Frimley.

“The patients at the sanatorium are all selected cases of tuberculosis in its first stage, who have been carefully examined and watched for some weeks at the Brompton Hospital.

“After their arrival at Frimley the patients do no work until their temperatures have been normal for some days. Then they begin on the first grade of outdoor work, which consists of simply walking about the grounds. From this they work up to doing severe manual labor, such as digging trenches in previously unbroken ground. The treatment usually lasts about six months.

“Of the cases transferred to the sanatorium last year, 110 were discharged with “total arrest” of the disease, 21 “much improved,” and 25 “improved.” Of these cases, 113 are at work, 19 are not at work, while 23 have failed to report, and only one is known to have died.

“Everywhere throughout the grounds the patients are at work; the women at gardening, cutting the grass, etc.; the men, some at their various trades under sheds and others in building a concrete reservoir and sawing firewood, etc. Among the work accomplished by the patients since the opening of the sanatorium may be mentioned the excavating of the walls of the reservoir and mixing and laying about 650 tons of concrete, making paths and laying concrete walks, building a subway between two of the buildings and felling and cutting into firewood about 100 trees.”