Address.

TUBERCULOSIS, ITS NATURE AND PREVENTION.*

BY HENRY BARTON JACOBS, M.D., BALTIMORE, MD.

IN the early years of the nineteenth century, corresponding to those in which we are now living in the twentieth, there was being waged one of the most notable wars against disease and death which can be found in history. The scourge of smallpox had held its devastating sway almost unchecked through the centuries. The people, accustomed to its presence, looked upon it as inevitable, and so, silently and sadly, gave up to its demands a full tithe of victims, while more than another tithe bore uncomplainingly the ugly marks of its visitation. Jenner's discovery of vaccination at the end of the eighteenth century opened new hopes. The glad tidings spread to all countries. Benjamin Waterhouse brought the word to Boston in 1800-2, and in the years that followed, 1803-4-5, the medical profession, the world over, waged its war upon the great scourge, instructing the ignorant, showing the way, and in twenty years, or even less, smallpox as a great international plague had ceased to be.

Now much the same thing is going on in these early years of the twentieth century. The great men of the end of the last century, Villemin, Pasteur, Koch, have shown what this disease, tuberculosis or consumption, is, and they and others have shown how it may cease to be the great devastating plague of our day. It but remains for the people to learn of it, to understand it, and then to use the right means of stamping it out forever.

To this end associations are being formed everywhere to carry on the educational and relief work, and I congratulate the citizens of Newport that they are not behind in this movement. Recently a national association was formed with the object of affiliating local societies, binding them into one great organic whole, so that the problems to be attacked, the work to be done, could be approached by a solid, united body, irresistible in strength and devotion.

In a simple way and rather briefly I want to tell you: 1, What tuberculosis is; 2, How it is acquired and fostered; 3, How it can be avoided or prevented; 4, How it can be cured; 5, and lastly, What I conceive to be the duties of the citizens of Newport in regard to stamping out the disease from this community.

The subject has been so frequently discussed in the past year or two that there are few who have not heard that tuberculosis, like diphtheria and typhoid fever, is a germ disease; but to many this term conveys little. I shall try to explain in homely language what is meant. You all know that, if you were to put a loaf of cake in a damp corner of a dark cellar, it would not be many days before that cake would be covered with a fine growth of blue mold and that the cake would be

more or less spoiled. Now this mold would come upon the cake because in the damp air of the cellar there were the invisible germs or seeds or spores of the mold, which can only be seen with a microscope. They settled upon the loaf and found it good soil upon which to grow, for mold like grass or flowers is a species of plant life, though very low down in the scale. No mold can grow unless there are mold seeds or germs, any more than can grass or flowers grow without seeds.

The mold in growing on the cake changed it from good cake to bad, made it sick, if you like, and if allowed to go on may even make it decay.

Now the growth of the mold is almost analogous to the growth of the germs of tuberculosis. They, too, are invisible to the naked eye but, if we catch them in a glass tube or a glass flask in which there has been placed some substance like beef juice or milk, upon which they like to grow, we see after a day or two a growth similar to a mold, not blue but white, and as this tuberculosis mold continues to grow it changes the beef juice or milk somewhat as the cake is changed. I will show you a picture of this mold growing. If now we take some of this growth, spread it out on a small piece of flat glass and put it under the microscope, we are able to see the individual germs or the seed of this tuberculosis growth or mold. They are very minute little rods which develop very rapidly indeed by lengthening and then splitting apart, each little fragment again lengthening and again breaking up. While doing this they nourish themselves upon the substance upon which they are growing and, like the mold upon the cake, they are spoiling that substance. You know molds have a preference in the substances upon which to grow. For instance, the germs of the blue mold, with which you are familiar, grow more quickly and more vigorously upon cake than upon bread perhaps. So with the germs of tuberculosis; they prefer animal substances, and especially the fluids and tissues of human beings, cows, calves, guinea pigs, etc. If then they gain admittance to the bodies of men or animals, they may grow there and change the tissues or fluids, so that the men or the animals become ill. This illness is the disease, tuberculosis, and when the tuberculosis becomes located in the lungs, it becomes consumption; without the germ there can be no disease. No matter how weak and debilitated the individual may be, he can never have tuberculosis or consumption until he takes into his body this definite specific germ, which produces by its growth the disease. You will see, then, if everybody could live in a place where there were no tuberculosis germs, nobody would ever have consumption.

Moreover, there is a farther consideration; namely, that when only a few germs get into a perfectly healthy body, the body has the means of battling with them and overcoming their growth; so that, if everybody kept his body perfectly sound and well and did not allow many tuberculosis germs to get in, he would stand a very favorable chance of never getting consump-

*Address before the Newport Association for the Relief and Prevention of Tuberculosis, August, 1904, illustrated with charts and lantern slide pictures.

tion. So that the great protection to every individual is in either never allowing germs to get into his body, or in so keeping his body in such health that if a few do get in they can be overcome without producing the disease.

As I have said, if the germs get into the lungs, they produce tuberculosis of the lungs, which may become consumption, for consumption is but the old and popular name for advanced tuberculosis of the lungs. If they get into the stomach and intestines, then it is tuberculosis of the intestines; if into the bones, then tuberculosis of the bones, which produces hunch-backs and the hip disease of children; if into the glands, especially the glands of the neck, then tuberculosis of the glands or scrofula; all these are due to the growth of this same germ, the germ of tuberculosis which has been named the *tubercle bacillus*.

I will speak to-night mainly of the tuberculosis of the lungs or consumption, for it is by far the most common form of tuberculosis. Indeed, a very large per cent of all our population dies every year from it. I will show you a diagrammatic picture of the lungs. You will see they are composed of air pipes, dividing and subdividing like the branches of an inverted tree, with little sacks at the tips corresponding to the leaves of the tree, where the real work of the lungs is performed, as it is in the trees. Sixteen or twenty times in every minute of our lives we expand our chests and take new air into these tubes. Whatever is in the air has a tendency to be drawn in, though if inhalation is made through the nose, some of the impurities are screened out by the intricate structure of that organ; so that breathing through the nose should always be encouraged. Indeed, one who thoroughly appreciated this fact some years ago wrote a very interesting little pamphlet, entitled "Shut your Mouth and Save your Life,"¹ and there is not altogether such exaggeration in the title as might at first be supposed. Sixteen or twenty times every minute we take air into the lungs and, if we happen to be living or working in an atmosphere in which there are germs of tuberculosis afloat, they are carried to some of these little sacks and may find lodgment and grow. The tissues try to expel them or to overcome them, and so set up an active growth and hem them in, forming tiny little nodules or tubercles from which the word, tuberculosis, takes its name.

In very many instances, if the body is strong and well, the tissues do overcome the growth of the germ, and after a time the little tubercle heals and disappears, leaving only a minute scar behind. But in less favorable individuals the germ gets the upper hand, grows and multiplies. The cells of the center of the tubercle are overcome, their character is changed, somewhat in the same way that the mold changes the character of the cake. These cells die, soften and break down, and soon a small cavity exists. This increases in size and reaches the surface of the air tube. The irritation of its presence makes the patient cough,

and, as he coughs, he spits out the contents of this cavity, contents which consist for the most part of germs and the broken-down tissue of the lung. Every time then that the consumptive coughs and spits he is likely to throw out a mass of these infectious germs, which have the power of producing the disease in a new individual if they are breathed in before they have lost their vitality.

Tuberculosis, therefore, is merely the growth within the body of the tubercle bacillus in great numbers, which so destroys the tissues and poisons the system by its presence and by its products that the individual becomes ill, loses weight and strength and finally, unless the growth is checked, dies.

If we were never exposed to the possibility of taking in the germ, we would never suffer the disease. The question then is, How can we limit the possibility of infection — how can we diminish the germ supply? As all the germs must come from some person or some animal already infected, if we can so arrange it that they cast off no germs which others can take, then we cut off the supply at once. The person with consumption who is careless where he spits is the greatest danger we encounter. We rarely are in danger from the fresh moist spittle, for so long as the spit is moist the germs are held and they cannot fly about in the air, but so soon as the spit dries and becomes a powder the germs are blown about by every whiff of wind and may easily be inhaled. Dried spit, then, is one of the most frequent sources from which tuberculosis is acquired. In the open air and in the sunlight this danger is not great, for after some hours' exposure to sunlight the germ loses its vitality; but within doors, away from light and pure air, the life of the germ is greatly prolonged. Thus the real danger of acquiring the disease is in being exposed, either in the work shop or house or schoolroom, to the dust which arises from the dried sputum or spit of a fellow workman or student or invalid member of the family. And as the carelessness of that infected one increases, so increases the danger of transmission; or, on the other hand, as light and fresh air are excluded, so is the danger of the germ increased. It is then among the ignorant poor, working in factories or sweat shops and living in dark, often damp, unventilated houses, that we should expect to find the greatest contagiousness; and the facts bear out completely this supposition. Nowhere is tuberculosis more transmissible, nowhere is the contagiousness greater, than among the poor and ignorant immigrants who live in the poor tenements on the East Side of New York.

I will show you a map of what is known as the Lung Block and a few pictures of the kind of houses composing this block. The more the method of acquiring the disease is studied the more convincing it becomes that tuberculosis, especially tuberculosis of the lungs, is a house disease, a house infection from the germs lodging in the dark corners. Patients afflicted, therefore, should always be careful not to cough

¹ "Shut your Mouth and Save your Life," by George Catlin, Health Publishing Co., Boston, Mass., 1890.

without holding something before the mouth, for fine sprays containing germs are thrown out during cough; and they should be careful never to expectorate except into paper or cloth which may be burned, or into some form of spittoon which may contain carbolic acid or some other substance sufficiently strong to kill the germs. I have pictures of various such spittoons.

The careful consumptive patient should be no menace whatever to his family or friends. He simply takes the proper precautions not to let his germs become scattered about where others may breathe them.

Absolute cleanliness of person and of room, as is carried out in all well-regulated sanatoria, not only makes living with the consumptive without danger but insures less risk from taking the disease than in any other place, for there all the germs are killed and there are none left for others to breathe.

I have already said that, if the body is kept in perfect physical condition, it has the power of resisting to a great extent the inroads of the germs; but there are all sorts of conditions which prevent the body from being kept in this perfect condition. And among these conditions which reduce the resistance of the body we may mention conditions of birth, habits, occupation.

All persons are not *born* with the same strong constitutions. Therefore, the weak are all the more likely when exposed to the disease to take it from lack of resistance. Any *habit* which impairs our vigor is also a predisposing cause to consumption, and no habit is more potent in this particular than the immoderate use of alcohol. Certain *occupations*, too, are most important factors in reducing the resistant strength of individuals. All indoor workers are more prone to the infection than out-of-door workers. Benjamin Rush, over a century ago, noted that consumption was almost unknown among the American Indians and the early settlers of this country. And the farmers and lumbermen are to-day perhaps the most immune class. Those occupations in which the workman is subjected to much irritating dust are particularly dangerous; so in general it may be said that whatever reduces the resistance of the body fosters consumption.

There are, moreover, *racial* tendencies to consumption. The negro race, of all peoples of which we know, is most prone to the disease. The relative mortality of whites and colored in Maryland show this very well. And this great increase in the susceptibility of the negro cannot alone be accounted for by conditions of ignorance and lack of hygienic laws, and can only be explained by assuming that in the evolution of the race it has not acquired the same powers of resistance or immunity to the germ of tuberculosis, that has been acquired by some of the white peoples. The Irish or Celtic race is also prone to tuberculosis. The statistics gathered by Mr. Frederick Hoffman, the actuary of the Prudential Insurance Company of New Jersey, are most interesting and somewhat alarming to the young

of Irish origin. They show that this race, together with the colored, should be particularly careful neither to be exposed to the tuberculous nor to allow their good health to become impaired to such extent that their resistant powers are diminished. Of all peoples the Jews are least susceptible; though under conditions of great poverty and bad housing, conditions in which many of the poor Russian Jews are living in our cities, they too may show an unusual proneness. To what is due the remarkable racial immunity of the Jews is unknown, but may possibly be explained as due to an acquired resistance through the centuries of struggle of this race.

All measures which the individual or municipality may take to prevent the propagation of the germs and in removing predisposing or fostering causes tends to prevent the dissemination of the disease. Anti-spitting laws, notification laws, fumigation laws, laws in regard to hygienic measures, laws in regard to tenements, workshops, schoolhouses, etc., are the measures we must employ, with general education of the people in the nature of the disease, how it may be spread and how avoided and prevented. Placards may be displayed, leaflets distributed, lectures given, etc., etc.

I have said nothing about the danger of taking the disease from animals, particularly from cows, but there can be no doubt, I think, that there is danger in this direction. None of us, I am sure, is willing under our present knowledge to eat tuberculous meat or drink tuberculous milk, and the laws for the slaughter of all tuberculous cattle are wise and should be rigidly enforced. Evidence seems to point to the fact that children are particularly likely to be infected by the milk of tuberculous cows which almost invariably contains the germs of tuberculosis. The intestine of the child seems to allow these germs to penetrate its wall more readily than that of an adult, so it is most important that pure milk be supplied to the young.

A few words now about the cure of tuberculosis, and here I want to encourage hope to the greatest degree. The old idea that consumption was a hopeless disease has definitely been proven to be false. You will be surprised, if you do not already know, the very large per cent of cases when treated properly from the start that recover. The annual reports from the various sanatoria and out-of-door camps, from all over this country and Europe, substantiate entirely this statement; and the remarkable thing about these reports is that they all agree so closely, whether the sanatorium be that of Sharon, situated a few miles out of Boston at an altitude of only 200 feet above sea level, or that of Saranac in the Adirondack Mountains, 3,000 feet, or in Colorado, 7,000 feet, or again those in various parts of England, France, Germany or Switzerland; the relative proportion of the number of cases sent home well is almost identically the same.

This shows conclusively that it is not so much a question of the situation of the sanatorium, not

so much a question of altitude, as a question of method of treatment; and the methods pursued now in all well-conducted sanatoria are practically the same. So it is to the method and not to the particular climate to which credit must be given.

A brief description of this method will show you the course to be followed by every consumptive, whether treated at home or in a sanatorium. The very first move is to see that he ceases to be a danger to those who are to take care of him or to visit him. He must therefore be provided with spit cups or paper napkins into which he can always spit, whether at home or on the street. Pocket flasks have been devised which are useful, and rubber-lined pockets into which paper napkins can be put are also useful. When in the house, small hand spittoons with paper linings which can be taken out and burned are cheap and serviceable — the point is that no consumptive should ever spit into any receptacle which cannot either be burned or sterilized by carbolic acid, boiling water or some such means. In coughing the patient should be taught to hold before his mouth a paper napkin so that the minute spray from his mouth may neither be a direct menace to those about him nor an indirect one through the drying of this spray and its becoming scattered in the dust of the house. Studies in the past few years warrant the statement that the invisible spray from the mouth of the speaking or coughing consumptive is a more dangerous source of the direct transmission of the disease than has heretofore been supposed. This spray, somewhat as from the mouth of an atomizer, can be carried fully four feet, and anyone breathing the air within that distance may inhale the active germs contained in the minute particles of moisture. The bed linen, the personal linen, clothes, even the carpets and hangings of the room where the consumptive sleeps, should be capable of frequent sterilization.

The patient himself must next be considered, and the measures adopted to insure his recovery should be directed to at least three points. First, to insure to the individual the greatest amount of fresh air possible; second, to insure to the individual the greatest amount of food which can be properly digested; and third, to inaugurate such manner of life that the forces of the body shall be exhausted as little as possible, while keeping up good moral tone and good digestion.

Drugs are of no avail, but the services of the physician are indispensable; he must plan the treatment and must see that it is carried out, and herein almost alone lies the advantage of the sanatorium over the home for the treatment of consumption. Patients at home will occasionally disobey their doctors; they see friends who tell them that this or that thing would be better for them; and he is a very strong-minded person who will not, sooner or later, yield to friends' importunities, which are always offered with such good motives but which are usually so bad for the patient.

First, then, the maximum amount of fresh air; from morning till night and from night till morning in the open air, winter or summer. If the disease be advanced and there is fever, then entire rest in a reclining chair or in bed in the open air. If the disease is very early and the patient is able to work, then work must be as far as possible in the open air, and the whole night should be given up to sleep in the open air, either out of doors with the open heavens above, on a porch or in a room with all windows raised. I have pictures of patients at rest in suitable open-air pavilions which I will show you; also pictures of houses with porch or veranda for open-air sleeping. The consumptives of Newport need not go away to find these things. Nearly every house in town has at least a pleasant back yard or garden, in which on a porch or under an awning they might spend their time while coming back to health and strength.

Secondly, the patient should have the maximum amount of food which can be properly digested, and to this end it seems wise to encourage the drinking of milk and raw eggs between the regular meals and before going to bed at night. In this way patients frequently take as much as two quarts of milk and a dozen eggs a day in addition to three hearty meals.

The third consideration calls for such manner of life that the forces of the body are well preserved, and so reserved for the battle against the disease. Heavy work is undesirable; indeed, severe exercise of any kind is bad. The patient should not become fatigued, but in the early stages, when without fever, he may be allowed light work or exercise which will keep up a zest in life and aid in preserving good digestion. If there be fever, then all exercise must cease and the patient keep either to a reclining chair or to the bed, until it shall have disappeared.

No medicines are necessary in the great majority of cases. Indeed, Dr. Trudeau tells me that one of the worst features he has to contend with is, that patients come to him with their digestive powers so broken down by prolonged dosing with creosote that their stomachs never recover, and therefore their powers for fighting the disease are so crippled that they never have a fair chance. The amount of harm done by the advertised quack medicine cures cannot be estimated, for it is through the early months of the disease when there is hope of recovery that the patient trusts to these false methods, fearing perhaps to consult a physician, and so loses the chance of recovery.

Under the manner of treatment which I have so imperfectly outlined, of the very early cases sent to sanatoria or treated at home in the same way, eighty to ninety per cent recover; of the more advanced cases, thirty to fifty per cent recover; of the far advanced cases, perhaps ten per cent recover. Nothing could speak louder than do these figures for an early recognition of the disease and for immediate treatment in the proper way. The physician who holds on to a patient, encouraging him that this or that medi-

cine will cure him, not only commits an egregious error but an unpardonable sin from which there may be no reprieve.

So far, then, as the cure of consumption is concerned, the most important things are *early recognition* and *understanding of proper procedures*.

Now Newport is an ideal town for the complete subjugation of this disease. It is almost an isolated community in some respects, *i. e.*, it is surrounded by water on three sides, and upon the fourth is a wide stretch of beautifully lying, open farm lands. Its permanent population is not exceedingly dense. It is comfortably housed, well-to-do, and well educated for the most part. Moreover, it is very stable. There are no great inroads of ignorant poverty-stricken immigrants from the less civilized part of Europe, such as the large cities of the country have to contend with, a class which forms the very center of local infections, making such quarters as the Lung Block of New York possible. It has no great tenement houses, the worst breeding places of all sorts of disease. Its streets are clean, its sewerage system admirable, its climate remarkably even, the tendency to longevity much beyond that of most communities. Indeed, I have been struck by the fact that in the last report of its Board of Health there were 125 deaths of persons over sixty, or over 35% of all the deaths for the year. And of these 125 over sixty, there were 32 over eighty, nearly 10% of all deaths, which means that ten people out of every hundred born in Newport live to be over eighty. I doubt if you find a better record anywhere.

But now look at the havoc consumption played with the population in the year 1903. As I should have told you, the great majority of those dying of consumption are cut off in the vigorous years of life. Few die of this disease under fifteen and comparatively few over sixty. Now, on looking at the report of the Board of Health, there were 154 deaths in Newport of persons between five and sixty, and there were 31 deaths from consumption during the year, and seven or eight more from tuberculosis of other parts of the body. It is perhaps fair to assume that thirty of the consumptives were between five and sixty years old at the time of their death; so that one fifth of all those dying between five and sixty died of consumption. Think of it! One out of every five of the population who dies within the period of most usefulness—from the age of five to sixty—dies of consumption.

Such a condition is not worse here than it is everywhere else, but it is nevertheless startling. If it were smallpox or cholera that were so doubly decimating the population, every effort of city and state would be up in arms against it. The whole community would be aroused, and nothing else would be done until the epidemic had been checked. But this frightful death-rate from consumption goes on year after year, and we passively submit without it exciting hardly a momentary comment, and yet consumption is a preventable and a curable disease, just as surely

as is smallpox. We need only be aroused to a knowledge of the methods of prevention and cure.

Ask yourselves, then, will you here in Newport any longer quietly sit by and let this useless destruction of young and valuable lives go on? That you are determined it shall not is shown by what you have already done. You have laws against spitting in public places; you have laws requiring the notification of all cases of the disease; you have powers granted your Board of Health to fumigate infected houses. You have a hospital dispensary where the poor may be treated and advice given. You now have formed a society to work in harmony with your health authorities for the relief and control of the disease. It seems to me, you are very fairly started to stamp it out from your midst. But there is yet much to be done. Let me enumerate some of the things.

First, the doctors of the town must bear the great brunt of the fight. And their prime duty is to see that no case of consumption escapes an early diagnosis. Nothing is so fatal to the success of treatment as failure of early recognition of the disease. It is in the first stages, and almost solely in the first stages, that we may expect any real hope of recovery, and so the failure on the part of any physician to make an early diagnosis militates just so much against the chances of that patient. To insure that early diagnosis the physician should feel himself called upon to bring to bear all possible means. It is by no means easy to surely say at the very first visit whether or not the patient has consumption, but, if there is the least doubt, if there is any question, resort should be made to repeated careful examinations of the sputum by expert microscopists and consultations with one's colleagues be called, so that within as short a time as possible the physician may be able definitely to say to his patient either that he has or he has not consumption. And if he has, it is far better all round to say so. The first shock to patient and friends may be very hard but the outcome is always better. The patient then understands he must not trifle with his complaint and will be likely to be all the more ready to follow suggestions for treatment.

The second great duty of the physician is in reference to the treatment. He must not encourage the belief that benefit will be gained by taking this or that prescription, a cough mixture or tonic, whether it be cod-liver oil, the hyperphosphites, or creosote. The time is too valuable to be given up to these procedures. Every day counts, and the only measures proven to be of real worth are those of which I have already spoken,—fresh air, food, rest, at home perhaps, on some farm, or better still in some sanatorium; but at any rate no delay, no trifling with drugs while the disease goes on from its incipient, hopeful stage to its advanced and less curable conditions.

The third duty of the physician is to report the case as one of tuberculosis to the health board.

You have a city law making provision for this, and it is one of the best provisions possible. No physician need have any hesitancy in doing so, no patient should object to it. The records of the Health Office are sacred and secret. In perhaps seven out of ten cases the mere notification is all that ever follows, but in the other three cases it may be wise for the board to take some action, either in relief, assistance or in fumigating the apartments after the patient shall have moved away, for no house in which a tuberculous patient has either lived or worked should go unfumigated. Nor should any new individual or family be allowed to move in until this is satisfactorily done.

Now these are among the most important duties of the physician. The duties of the citizens of Newport are not less important, though they be fewer in number. The most important of all is to see to it that the Board of Health and this society be supplied with funds by which the work can be carried on. The Board of Health needs to have in its employ a well-trained active young man, whose duty it shall be to examine for the tubercle bacillus every specimen of sputum submitted to him by any physician of the town. This young man needs a small laboratory, a microscope and a few chemical reagents. The whole thing won't cost over fifteen hundred dollars a year.

Secondly, the Board of Health needs funds for fumigating the houses of those too poor to properly have it done for themselves. No feature in the struggle against consumption is more important than that surely no second family, tenant or boarder should enter a house or a room in which has lived a consumptive, without its first having been scientifically and thoroughly fumigated.

This new society which has been organized to carry on the crusade needs generous encouragement and support. It wishes to spread knowledge of the necessity of prevention and cure by means of printed posters, leaflets, circulars; it needs to supply spit cups to those unable to buy them; it needs to employ a nurse to visit in the homes of the very poor who may be afflicted, a nurse who shall spread a knowledge of the best means of living, the best means of preventing other members of the family from catching the disease. The society needs money to supply proper food to these very poor. And farther, the society needs money with which to establish a small sanatorium upon one of the neighboring country hillsides, where young men and women, just in their very prime, who have suddenly found themselves attacked, may be sent with the great hope that a large majority of them by proper treatment may within four or six months come back to their families and to their work able to resume the duties of life, saved by this means alone from the early, sad ending of many a happy ambitious youth.

These are some of the duties of the citizens of Newport, physicians and laymen, which I would earnestly plead with you to undertake.

Original Articles.

THE IDEAL DOCTOR.

BY DAVID W. CHEEVER, M.D., BOSTON.

I SHALL define Altruism as "sacrificing self to others," and Egoism, as "sacrificing others to self." Although the precepts of Buddha, the maxims of Confucius, the writings of Cicero and Seneca inculcate sacrifices to friendship and brotherly love, yet it is certainly true that altruism and a wide charity date from the advent and teachings of Jesus Christ; general benevolence, the growth of hospitals, the sedulous care of cripples and weaklings, are distinctly Christian practices.

The term "Ideal Doctor" is not here limited by specialty or by general practice: it applies to all medical men.

WHAT is the best type of a doctor?

The relations between doctor and patient are so peculiar as to require a blending of altruism and egoism, of self-denial and self-assertion.

The physician must do all for the patient; he must put himself in his place; but, on the other hand, he must maintain and assert his own rights and his self-respect. He must be a gentleman; and being a gentleman he is at great disadvantage when dealing with patients of a commercial spirit. He cannot meet them in equal combat; they defeat him in practical business relations.

The doctor knows he ought to be paid for sincere and honest care of a case; the commercial patient judges by results, perhaps disputes claims, belittles services, has an absolute ignorance of the finer feelings of the physician.

The doctor puts himself in the patient's place; treats him as he would wish himself to be treated. The patient may, or may not, appreciate these services. If not, what remains for the doctor but egoism; a reasonable selfishness to protect his own interest?

Now here is the difficulty. If the relation of patient and doctor is to be wholly commercial, then the doctor may exaggerate the money value of what he does. In short, the professional spirit is sunk in a trade. Also the doctor may be *himself* commercial, and even avaricious. In this case he overcharges, exacts all he thinks the patient can pay. He evidently has not the professional spirit; he is making a trade; he is "in it for all it is worth." The results of these methods are twofold disastrous: First, on the doctor, leading to a contempt for small fees, for small cases, and for humble patients. Second, on the patient, leading to a general idea of the great cost and uncertain price of any sickness or emergency; thus driving him to quackery, to no treatment, or to gratuitous treatment in hospitals.

On the other hand, every doctor has to treat the poor for nothing. Here altruism is abused. For the vast expansion of hospitals, dispensaries and free clinics leads many to apply who could or ought to pay something to the doctor. The sliding scale of medical prices, which the varying worldly possessions of a community renders inevitable, fosters both the over-charge and the under-charge. It is thus plainly to be seen that the doctor is torn between too much sympathy, too much altruism, the fear of becoming commercial, or the danger of starving, himself.