

serum was only half as active as our own serum. Hence if we express the activity of normal serum for phagocytosis as 1.0, obviously we must express the abnormal activity of the patient's serum as 0.5. These figures represent respectively what we term the opsonic index of the normal person and of the diseased.

The first generalization I will ask you to remember, therefore, is that every patient, at any rate in the early stage, in the uncomplicated stage, who is infected by bacteria under ordinary circumstances has got diminished resistance, and that deficiency of resistance does not reside in his white blood corpuscles, but resides in the fluids of the blood. In other words, you can say that a patient with a low opsonic index is at least a candidate for infection by a particular microbe. One could go through a series of people and find out whether they had a normal power of resistance against the tubercle bacillus, or a diminished power of resistance, and in a world which is filled with tubercle bacilli you may be sure that a person with a diminished resistance becomes a patient; for we live in a world where no person reaches mature years without meeting the tubercle bacillus. Whether he is infected or not depends on his power of resistance. We find that a patient in the early stage has a low resisting power and we assume that if we had been able to get him before infection we would have found him in the same condition.

So far all this is only legitimate gratification of the intellect. We are able to explain to ourselves now why in a world where we all come in contact with infection, some people take tubercle and some do not take tubercle, why some get boils and some do not get boils. Some advertise in the street that they have a small resistance to the staphylococcus, because they have spots on the face. So one sees that resistance is the important thing. The next point is. What is the good of that unless you can alter it?; and when you throw back your thoughts to what has been done in connection with the prevention of infectious disease you will see that inoculation is resorted to. Commonly when we speak of inoculation we mean vaccination, and people that are subject, as we all are, to attack by the smallpox microbe take precautions through inoculation that they have a higher resisting power. Therefore the question suggested itself in connection with the patient I spoke of with the boils whether something could not be done in the way of inoculation to increase his resisting power to the particular microbe that affected him. In order to do that we must first study what happens when the microbe attacks the body. That meant that we must undertake an experimental inoculation with the particular microbe under consideration.