

Now to apply all this to tuberculosis and its arrest. The disease, it is true, is of a different type—it is of slower development and more progressive character. To pursue my simile, if I may venture to do so without offence and without wishing to give offence, tuberculosis is to the human organism something like what Irish discontent is to the body politic. If we are healthy our first line of defence, the surface cells of the nose, mouth, throat, air passages and digestive tract can directly destroy occasional tubercle bacilli taken up by them; only if an excessive number be taken up are they killed by the bacilli. Healthy people that is can breathe in tubercle bacilli without harm resulting. That this occurs has been proved by examining the nasal secretion of nurses and students in tuberculosis wards and finding tubercle bacilli in the same, and I may point out the remarkable fact that in a well conducted tuberculosis hospital the nurses are found not to contract tuberculosis. They keep themselves in good condition.

The bacilli may get beyond this first line of defence into the lymph and blood and there may not cause any disturbance, being killed before they can multiply. Quite a number of cases are on record in which tubercle bacilli have been found in apparently healthy lymph glands showing no sign of tuberculosis. Again we can, for example, take two healthy young dogs and feed them with milk to which we have added a fair but not excessive number of active tubercle bacilli, and killing one of them two or three hours later, we can detect the tubercle bacilli in the lymphatic fluid draining away from the intestines. This is a process which, as I and others have pointed out, is constantly proceeding to a slight extent in connexion with the abundant bacteria of various kinds which people the intestines. Keeping the other dog for some weeks or months it may show not a sign of tuberculosis, and killing it at the end of this time we may not detect a sign of this disease in any region of its body.

But now, even if temporarily the general health is depressed, the history may be very different. The tubercle bacilli at the point of entrance, or it may be when they are carried into the circulating lymph or blood, are not necessarily destroyed. In many parts of the body they are, but if the organism possesses an Ireland—a region of constitutional weakness with poor circulation, and poor nutrition—if by chance the bacilli find their way into this, the cells cannot destroy them, but on the contrary they multiply, produce their poisons, killing the cells and developing a focus of inflammation—a tubercle. Such a region, as everyone knows, is the apical part of either lung. From its relationship to other parts there is poor circulation and nutrition, and, added to this—although here remembering my simile I must speak delicately—there may be something innate in the properties of