

States, and even in such countries as Spain, Italy, and Switzerland; and severe punishment has at different times been inflicted upon butchers and others who have wilfully sold such flesh for consumption.

Very recently a most striking example of the effects of consuming the flesh of a tuberculous animal has been brought to light by a French physician in the case of a young woman who rapidly became consumptive as the result of devouring the imperfectly cooked bodies of tuberculous fowls.

That a certain amount of relation exists between the death-rate of man and animals respectively from consumption, and that this relation is materially affected by the use of tuberculous flesh for human food, is afforded in a chart issued by the authorities of the Grand Duchy of Baden in the year 1881, and published in Lydtin, Fleming, and Van Hertsen's paper.

The chart applies to no less than 52 towns, and shows that where tuberculosis is prevalent among cattle, it is equally prevalent amongst the human population, and is particularly prevalent in those towns in which the number of low-class butchers is greatest. One remarkable exemption to this is found in the town of Wertheim, but it is significantly pointed out that from this town large quantities of sausages, made from flesh of inferior quality, are annually exported.

That the flesh of tuberculous animals, and even the tuberculous organs of animals, may be consumed with impunity when properly cooked, cannot be denied, but in how many instances, it may be asked, is such flesh eaten without being properly cooked?

When the facts already stated as to the power of resistance to heat of the spores of the tubercle bacilli are borne in mind, it will be plain to all observant persons that, in the ordinary process of cooking, especially in the cooking of large joints, there may be ounces of flesh devoured by human beings that are never subjected to a sufficient amount of heat to destroy these spores. Take for example the cooking of a beef-steak, or of a large roast of beef. How many people are there who prefer that it shall be *under-done*? and consequently, in how many instances must the flesh and internal organs of animals be eaten, in the interior of which numbers of bacilli and their spores retain their vitality?

It is well known that many people have a great partiality for ox kidneys and for liver—especially the livers of poultry—and that ignorant persons are not always particular in reference to the existence or non-existence of such apparently harmless things as small yellow spots or blebs (tubercular nodules); and I have on several occasions had such organs submitted to me for examination that had been sold for

human food. The lymphatic glands are more often affected by the disease than any other organs of the body, and that large numbers of these glands or kernels are situated in the deep portions of the flesh, and are by many looked upon as a delicacy.

USE OF THE INNER ORGANS.—While there may be some difference of opinion as to the flesh none can exist in reference to the organs, they should be unhesitatingly condemned; and particularly in view of the fact, that in whatever way the disease may be contracted, or through whatever channel the bacilli may gain access to the system they must necessarily find a lodgment in the lungs, the stomach, the intestines, or the liver: and assuming for a moment that they gain access to the blood, they are bound in the ordinary course of circulation to pass through the vessels of the organs mentioned, and in doing so may be arrested in the capillaries of these organs.

The point which has received most consideration in connection with the consumption of flesh is, as to where the line (if any) shall be drawn—i.e., whether the carcass of an animal which only shows evidence of the existence of tubercles of the serous lining of the abdomen and chest, may be with safety passed after the lining has been removed by "stripping."

If it could be shown beyond the possibility of a doubt, that under these circumstances there was no contamination of the muscle itself or of the lymphatic glands, and if every particle of the tuberculous lining be removed, such carcasses might be used as human food with impunity. But evidence as to the non-existence of bacilli in the flesh, could only be gained by careful and prolonged microscopic examination, and inasmuch as the process of staining required to render the bacilli visible is a tedious and elaborate one, it is evident that the adoption of such a system of examination in all cases is impracticable; nor can the test of inoculation of animals with the juice of the flesh—seeing that the disease requires a considerable time to develop—be brought into requisition; and even if this were not the case such a test would be prohibited by the provisions of the Vivisection Act.

It may be argued that there is no direct proof of the transmission of tubercle from animals to man by the consumption of flesh, such proof it need scarcely be said, cannot for manifest reasons be obtained, but the mass of indirect proof in favor of such supposition is enormous, and if our arguments against the use of such flesh are based only upon analogies and deductions they are sufficient to warrant us, in view of the great gravity of the question, in prohibiting the sale of tuberculous flesh for human consumption.