

winter and when the company is getting the harvest away and placing coal and other winter supplies all over the country.

Now if it means all this to the company, what does it mean to the man himself? It means that he is incapacitated just at the time when there is plenty of work for him to do.

It means a heavy raid on his financial condition for medical, hospital, and convalescent expenses at the time of the year when he can least afford it.

Having all this in our minds we decided to approach the Company and get their co-operation and were met more than half way in the scheme. This however was only the starting point as we still have to get the consent of as many as possible and placed the proposition before them as clearly as we could and were more than satisfied to find that a great number entered into the work sufficient at least to warrant our going ahead with the vaccination. All the district surgeons were also eager to start ahead with the work as soon as possible. We soon found out that our troubles were only commencing. The men all had a very painful recollections of having been vaccinated for smallpox and immediately put typhoid vaccination in the same category. We were also dealing with a non-disciplined lot of men whom we could not force to be vaccinated as might have been done in the army, so it had to be optional and in several places it required a great deal of patience and some hard talking to convince them that it was being done for their own good.

For the complete treatment we use three inoculations at intervals of 10 days. The first inoculation consisted of 8 minims containing 500,000,000 killed bacteria. Ten days later a second inoculation of 15 minims containing 1,000,000,000 bacteria and again ten days later a repeat of 15 minims of 1,000,000,000 bacteria.

The site for the inoculation was chiefly the upper arm either at the insertion of the deltoid muscle or the back of the arm into the triceps.

These injections were done as nearly as possible in the afternoon so that the reaction would be all over by morning.

A few hours after the injection the reaction commenced like an oncoming attack of LaGrippe, slight headache, general soreness, lassitude, slight elevation of temperature and in some cases some slight nausea. This lasted for about ten hours and was then completely gone. The local reaction was redness, pain, swelling and heat, this lasted longer than the general symptom but was pretty well over in 48 hours.

We use the ordinary hypodermic syringe with several needles which were sterilized by boiling. A separate needle being used for each inoculation. The site of inoculation was simply prepared by painting with Iodine and after the injection was done no dressing was applied.

Some of those inoculated showed more severe symptoms than the rest such as syncope which lasted for a short while and recovered without any treatment. Examination of these men afterwards showed no reason why it should have happened. We found no condition that we could classify as a contra-indication to vaccination. As to the time lost as the result of the vaccination about 95 per cent of the men kept right at their work. The other 5 per cent were laid off for not longer than 48 hours.

Last year there were about 5,500 inoculations done with two cases of typhoid developing amongst them and one of these two had only received one injection, and came down with the fever a few days later so that it is possible that he was coming down at the time of the inoculation.

Among the other men living under exactly the same conditions as the men who were vaccinated there were 220 cases of typhoid.

One of the most striking results of the vaccine was in a gang of about 35 men who were camped within the city limits and who absolutely refused to be vaccinated at first. There were 11 cases developed in this camp and then the men began to ask to be vaccinated which was done and following that we had only one more case.

Last year Dr. Maclaren and Drs. King and Green used the vaccine in the treatment of cases using at each injection small doses of about 1,000,000 bacteria every fourth or fifth day and found that in those cases which they treated from the beginning