

THE STERILE SYRINGE.

SOME VERY DISQUIETING CONSIDERATIONS.

By John Hatcher.

The widely prevalent practice of relying on the use of alcohol or ether as a disinfecting agent for hypodermic syringes and needles may be convenient, but it is decidedly dangerous. This fact has been well known and fully appreciated by bacteriologists for a good many years, and the fact that bacteria may survive an immersion in alcohol or ether has been demonstrated experimentally a number of times. Every few years attention is directed to this danger, and recently Professor Bigger in conjunction with others has again demonstrated the dangers of sepsis from this cause. It is true there are many who will quote a lifetime of experience of the use of alcohol as a satisfactory disinfecting agent, and to prove their claims will give an astronomic figure as the estimated total number of injections safely carried out. It is certainly very difficult to reconcile the fact that so few accidents are known to have occurred with the dangers associated with the use of alcohol as a disinfecting agent. The fact that the danger is somewhat remote is by no means an adequate reason for taking quite unnecessary risks, which it must be confessed most of us do. It should be fully understood that many bacteria, particularly spore bearers—and this includes such organisms as bacillus tetani as well as most of the gas-gangrene group—can withstand immersion in both alcohol and ether for a very long while and still remain virulent. The fact that so few accidents occur is probably due to the fact that the alcohol in which the syringes and needles are commonly kept happens to be frequently changed. Also at reasonably frequent intervals it is necessary for other reasons to sterilise the syringes by boiling.

The Only Safe Method.

The only absolutely safe method is sterilisation of both syringe and needle in the autoclave, or if an all-glass syringe is used dry heat may be employed. That is to say, the syringes and needles are placed in a hot-air oven at a temperature of 160° Centigrade for one hour. The only other alternative is, of course, boiling for twenty minutes, preferably in a 5 per cent. phenol solution, though the phenol must afterwards be removed by rinsing out with sterile water. Various schemes for improving the poor bactericidal properties of alcohol have been suggested, such as, for example, the addition of a minute amount of thymol. It must, however, be confessed that most bacteriologists are rather sceptical of the value of these procedures. Alcohol diluted to 70 per cent. is very much more effective, but the storage of metal instruments, such as needles, in alcohol containing 30 per cent. water is to expose them to the attacks of rust. Certainly the mere fact of placing syringes and needles in alcohol or ether does not sterilise them, even if the immersion is prolonged. The moral is that every effort should always be made to use syringes and needles sterilised by either autoclaving, hot air, or, as a last resort, boiling. Incidentally, needles and all-glass syringes may be kept sterile for an indefinite period if the following method is used.

Hypodermic needles should be placed in a test tube, in the bottom of which has been placed a wad of cotton wool to prevent the point from becoming turned through contact with the glass; the top of the tube is then tightly closed with a well-fitting wool plug. Syringes should be taken apart—that is to say, the barrel and plunger separated and placed in a small tin wrapped in lint. Tubes containing needles and tins with syringes may then be sterilised in the hot-air oven and stored until required. If it is impossible to use these methods the only alternative is to boil the needles and syringes after use and use only fresh

alcohol for storage, protecting the container from contamination by air-borne organisms. It is well that human immunity to bacteria infection is in general so surprisingly high. Undoubtedly it prevents many accidents which might be traceable to injections or vein punctures for the collection of blood specimens. This risk, however, should always be borne in mind, and it is well to remember that immunity is most liable to be at its lowest point in bad health.

NURSING ECHOES.

From day to day our King and Queen pursue their devoted services to the nation and come into touch with workers in every activity.

Her Majesty finds her greatest pleasure in visiting war hospitals, where of course she wins the hearts of the sick and wounded by her sympathy. The men tell of their exploits and dangers, soldiers wounded in Northern France and Flanders reported to the Queen how German planes attempt to bomb the hospital ships which bring them across the channel, and of other atrocities. With one and all she has abundant sympathy.

The Queen poured out the tea at a party for 20 overseas nurses who had just returned with a hospital convoy from the battlefields of France, when recently visiting Lady Frances Ryder's Home for Overseas Visitors in Cadogan Gardens. The nurses told her of their experiences and of their lightning evacuation when the Germans were within a few miles of them.

The nurses, some of whom were members of Queen Alexandra's Imperial Military Nursing Service, were spending a few hours of their emergency leave.

No doubt the tea tasted extra sweet!

Miss Florence Horsbrugh, M.P., Parliamentary Secretary to the Ministry of Health, has sent out an urgent appeal to trained nurses to volunteer for war duties.

About 17,000 trained nurses, 40,000 auxiliary nurses, and 7,000 assistant nurses are needed, all giving full-time service, as well as 100,000 auxiliary nurses giving part-time service.

The need is made urgent because of the outbreak of total war.

Hutments have already been built to accommodate casualties and nurses, but in most cases are not yet occupied. In England and Wales 107 hutted hospitals are going up, generally as an annexe to an existing hospital.

These hutments will contain 37,000 beds when completed; 23,000 beds have already been provided for.

They are planned as one ward to a hut, 144 feet by 24 feet, with kitchens, bathrooms, linen rooms and sister's duty room.

To man these hutted hospitals and to fill all the needs of A.R.P. and other services, Miss Horsbrugh hopes to raise the Civil Nursing Reserve strength to 160,000 nurses.

Rates of pay: Trained nurses, £90 a year and board, lodging and laundry—if doing work of increased responsibility, £20 extra; assistant nurses, £55 and allowances, with £10 for additional responsibility; auxiliary nurses, who are being taught first aid, home

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