

syphilis, pneumonia, scarlet fever, and measles among the number, and, until its many forms and their causes have been properly worked out, the prevention of deafness arising from it cannot adequately be proceeded with. I may say here that the importance of investigating the causes of meningitis is even wider than as concerns the prevention of deafness alone, for this disease causes as many deaths as scarlet fever and measles put together. In 1909, the deaths from meningitis, not including over 10,000 due to convulsions (many of which were certainly instances of meningitis), or those in which the meningitis was a complication of scarlet fever or measles, was 11,118, and in 1912 the deaths from meningitis in London alone were 1,587.

The second group of cases—the infective diseases—includes such maladies as scarlet fever, diphtheria, measles, mumps, smallpox, whooping cough, tuberculosis, and syphilis. Tuberculosis attacks the ears of infants and young children, and may cause great destruction of the organ, and so of its function. It is, however, a disease which tends to kill, and the majority attacked by it die before school age. It arises either as a deposit of tubercle in the bone behind the ear, or by infection of the tympanum through the Eustachian tube, probably by regurgitation of infected food from the stomach, especially milk. The result is chronic discharge from the ear, with rapid destruction and early facial paralysis. One of the characteristics of tuberculosis of the ear is its painlessness. The prevention of tuberculosis of the ear is almost entirely a question of the prevention of tuberculosis generally, for the treatment of the ear condition is too often one in which function has to be sacrificed in the attempt to save life.

Syphilis is the cause of acquired deafness of a terrible kind. It is generally accompanied by syphilitic eye disease, the defect of hearing usually coming later, although it may appear earlier. It is a condition eminently for prevention, as treatment, once the deafness is established, is unsatisfactory. Syphilis itself is a disease very amenable to treatment, and those children who become blind or deaf, or both, are those in whom treatment was neglected in infancy.

(To be concluded.)

An exhibition, representing domestic economy, will be opened at the Institute of Hygiene on January 17th, when an Anti-Waste Campaign will also be started. Cooking economy and household economies are to be the special feature of the exhibition.

OUR PRIZE COMPETITION.

HOW WOULD YOU PREPARE FOR USE:—(a) CHROMIC CATGUT, (b) GUM-ELASTIC CATHETER, (c) SILK, (d) HORSEHAIR?

We have pleasure in awarding the prize this week to Miss J. V. McNeillie, Ervie, Stanraer.

PRIZE PAPER.

(a) In preparing for use chromic catgut, the processes of hardening and sterilization are combined. Made from the intestines of the sheep, the nature of the material presents many obstacles in the way of sterilization; e.g., it cannot be boiled in water, like the instruments or silk, nor immersed in watery antiseptic solutions like silkworm gut, &c. In the commercial state it contains many impurities and micro-organisms; therefore mechanical cleansing is necessary, and the removal of fats and oils used by the manufacturers by steeping in ether for 24 hours, and changing the ether till clean.

(1) Make solutions A and B: A, chromic acid 1—5 of water; B, take of A solution 1—5 of glycerine.

(2) Immerse gut in B solution from 48 to 96 hours—the former for the finer sizes to give it a little stiffness, to prevent the slipping of knots and too rapid absorption; the latter for ligatures of large vessels.

Steeped in above solution for four or five days, the catgut resists the action of the tissues for a week. If steeped for a week, it will resist absorption for three weeks.

(3) Rinse in sterilized water; some use warm, some cold, the object being to remove all excess of chromic acid, as it makes the gut brittle. Stretch and rub lightly with sterilized towel, and leave for ten or fifteen minutes until perfectly dry.

(4) Wind on sterilized glass rods, and store in a previously sterilized glass jar of 1-5 phenol and glycerine, and keep for three weeks before using (sealed and labelled with size, mode of preparation, date, &c.). Only a few spools should be put in each jar, as there is a chance of contamination each time the stopper is removed. Before opening, the jar must be washed in a 1-20 carbolic solution, and everything coming in contact with the catgut (forceps, scissors, needles, &c.) must be freshly sterilized, and the gut (each stitch or ligature as required) dipped in absolute alcohol just before using.

Extreme care and full precautions against contamination are of the utmost importance from the commencement of sterilization until the gut is required for use; for instance, the theatre thoroughly cleaned and disinfected, the

[previous page](#)

[next page](#)