

OUR PRIZE COMPETITION.

DESCRIBE THE MECHANISM OF THE EAR. FOR WHAT CONDITIONS SHOULD THE EAR BE SYRINGED? DESCRIBE METHODS OF PREPARATION.

We have pleasure in awarding the prize this week to Miss E. Muddiman, Arnold Road, Northampton.

PRIZE PAPER.

Sound is carried by waves in the air following upon one another like waves of the sea. These waves are caught up by the somewhat trumpet-shaped outer ear or auricle. The sounds caught by the auricle travel inwards along the canal called the external auditory canal to the drum. The external auditory canal is about an inch long, and is lined by thin skin in which lie the glands that secrete the wax and from which grow the hairs which prevent foreign matter from entering the ear. At the bottom of the canal the air vibrations strike against the drum or tympanic membrane which is stretched tightly across the bottom of the canal. The drum begins to vibrate when the sound waves strike it. On the inner side of the drum is a small chamber lodged in the petrous portion of the temporal bone. Across it stretches a chain formed by three bones—the malleus, incus, and stapes. The malleus lies against the inner surface of the drum, the incus lies between the malleus and stapes, and the stapes or stirrup bone covers an opening, the fenestra ovalis, in the inner wall of the middle ear. By means of this chain of bones the vibrations of the drum are conveyed across the middle ear to the fenestra ovalis which forms the outer window of the internal ear. Within the fenestra ovalis is a space known as the vestibule with elegantly shaped spaces, the cochlea in front, and the semi-circular canals behind opening into it. These spaces are bathed in fluid and the fluid is made to vibrate by the movement of the stapes at the fenestra ovalis. Thus the air waves are solid waves in the middle ear and liquid waves in the internal ear. The cochlea contains the final receiving apparatus.

The auditory nerve, which comes directly from the brain to the cochlea, ends in a great number of fine hair-like cells known as the organ of Corti. These cells are of different lengths, and they constitute a manifold, though microscopic instrument, the vibrations of which pass along the fibres of the auditory nerve to the grey matter of the brain, where they become converted into the conscious sensation of sound.

The air enters the middle ear through the Eustachian tube, which passes from the nasopharynx at the back of the nose to an opening in the anterior wall. If one has had inflammation of the throat from any cause, the inflammation is apt to spread from the naso-pharynx along the Eustachian tube to the middle ear, and acute or chronic inflammation may follow.

The ears will probably be ordered to be syringed in the following conditions:—

1. Purulent discharge.
2. Accumulation of wax.
3. For the removal of an insect or other foreign body in the canal.

It will be necessary to prepare for syringing: Basin, water, soap and nail brush for nurse's hands; mackintosh, dressing towel, lotion bowl, two receivers, forceps, pipette, swabs, irrigator or soft rubber or glass syringe, normal saline or boric lotion, boric powder and sterile water.

Also for Condition I.: Hydrogen peroxide, 10 volumes, to drop in ear before syringing; Condition II., warm glycerine and soda to soften wax; Condition III., warm olive oil, which will make any insect float to the top and be easily removable.

A glass syringe is not very satisfactory, as it requires two hands to manipulate it properly, and an ear cannot be successfully syringed unless the lobe is lifted to make the canal quite straight, and the stream of lotion gently directed upon the upper wall of canal, so that the lotion returns along the lower wall into the receiver held in position to receive it. After syringing, the ear should be well dried and dusted with powder to prevent cracks.

HONOURABLE MENTION.

The following competitors receive honourable mention: Miss Marion Zeigler, Miss Lucy C. Cooper, Miss Amy Phipps, and Miss Clara O'Donnell.

QUESTION FOR NEXT WEEK.

State what you know about the Care of the New-Born Babe.

HELP FOR MOTHERS AND BABIES.

Her Royal Highness Princess Christian will lay the foundation stone of the British Hospital for Mothers and Babies at Woolwich (National Training School for District Midwives) on Saturday, October 16, at 3 p.m. The institution was founded in 1905 to improve and lengthen the training of midwives. The hospital is now obliged to refuse from 20 to 30 mothers every week.

[previous page](#)

[next page](#)