

Practical B

Examination of the ear: EXPLAIN, DEMONSTRATE, SUPERVISE

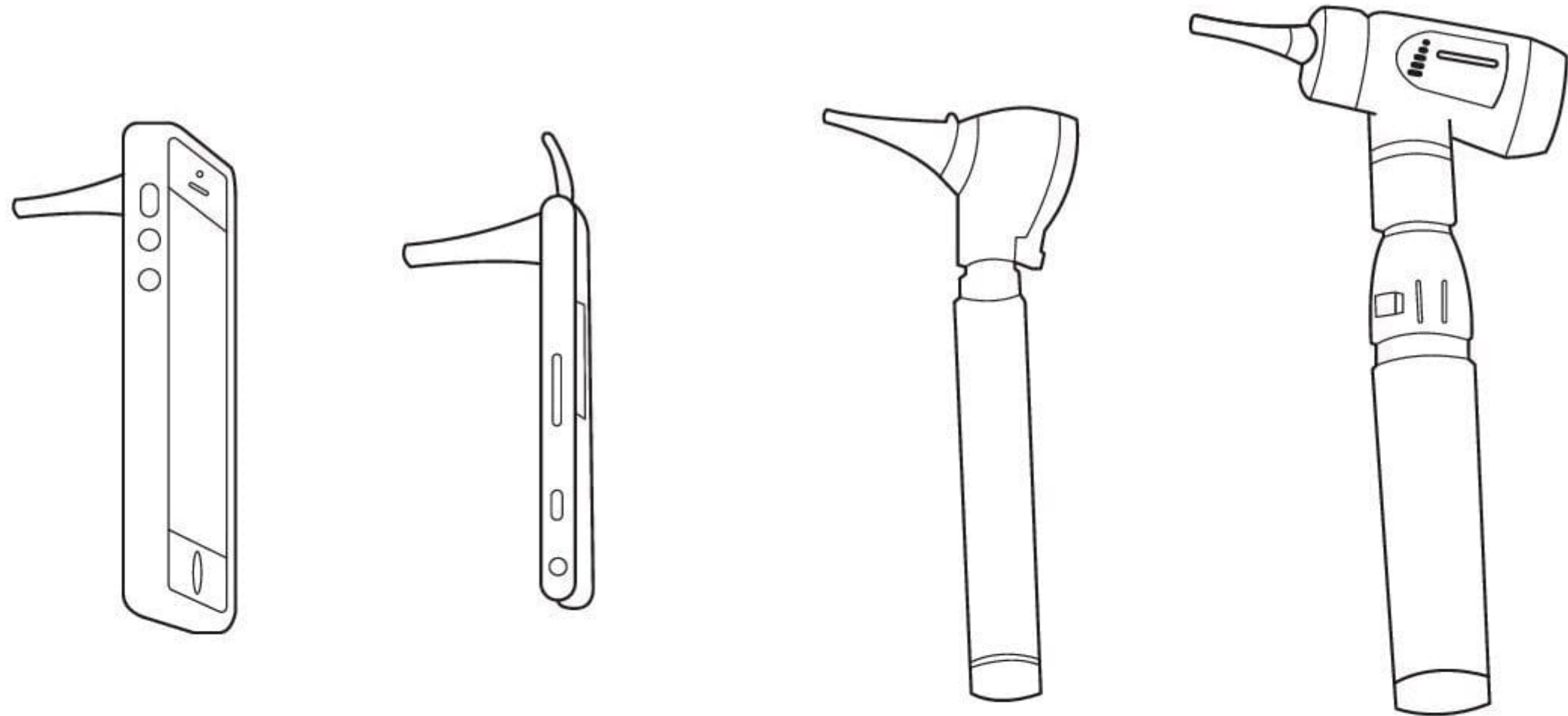
Introduction

Examination of the ear includes looking at the external ear and the ear drum.

You will need an otoscope. An otoscope shines a light into the ear canal, and has magnification to make the image bigger. There are many kinds of otoscopes. Some otoscopes can connect to a computer or mobile phone and record pictures or videos.

Equipment

1. An otoscope
2. A speculum

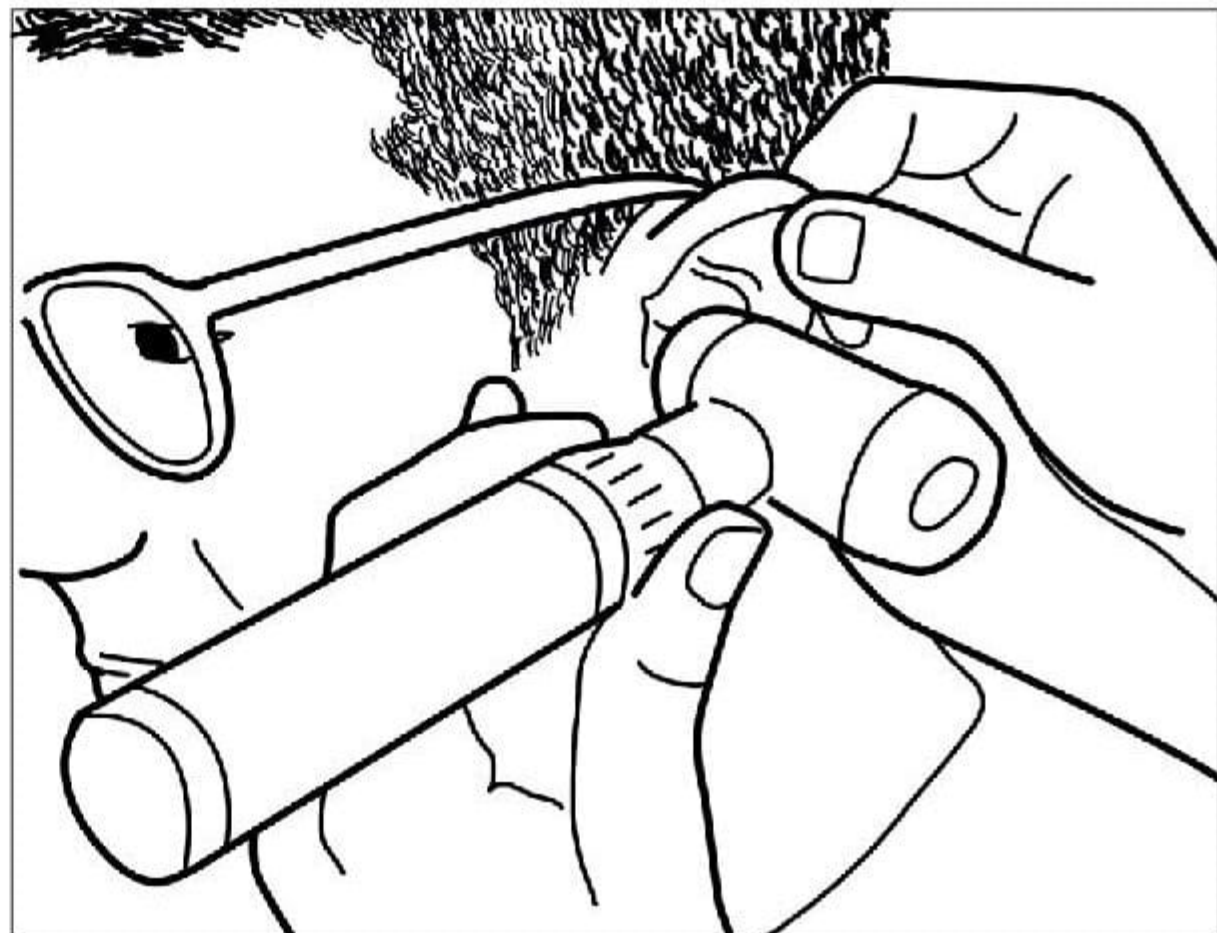
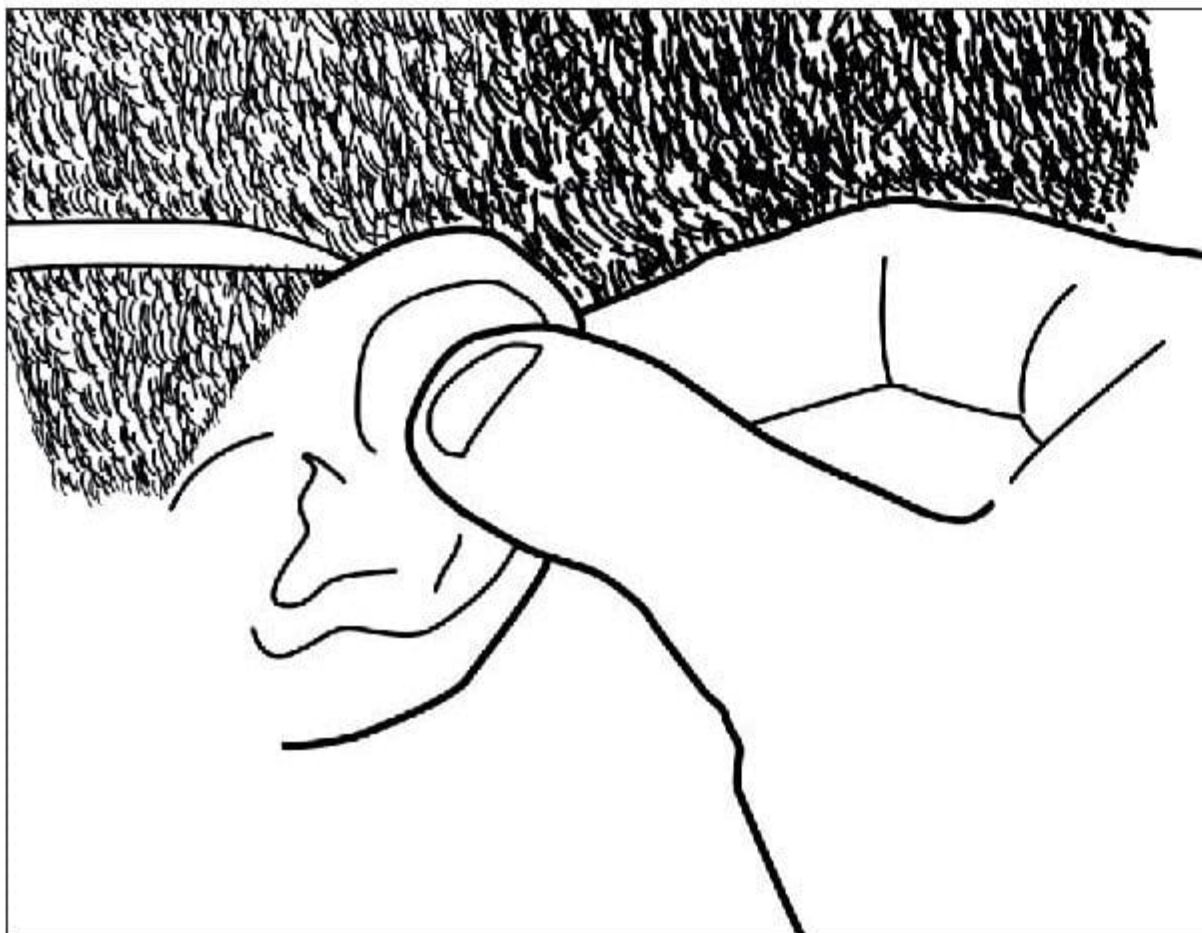


An otoscope needs a speculum. A speculum is an attachment for looking into the ear canal, and is usually made of plastic. Make sure to use a clean speculum in every patient you see.

PROCEDURE

1. Wash your hands
2. Ask the patient if you can examine their ear and if they have any pain.

3. Make sure the patient is sitting and you are at the same height as the patient.
 4. Examine the pinna and around the pinna. Make sure you also examine behind the pinna to look for any swelling, redness or pain. Look for scars from ear operations. The most common area for these scars are behind the pinna or just in front of it.
 5. Before starting otoscopy, push the tragus and observe if the patient has any pain. Also be watchful for any wincing or indication of pain when you touch the ear or insert the otoscope. Also, look for any evident discharge. If discharge is seen this will need to be mopped up before otoscopy (see practical E).
 6. Make sure the otoscope light is working. If it is not the battery may need to be replaced or charged. If it still does not work, the bulb might need to be replaced.
 7. Place the speculum onto the otoscope. If you have different sizes of speculum, you should use the biggest one that fits in the patient's ear canal. Make sure that the speculum is clean. Clean it with cotton wool and disinfectant before starting and after completing the examination.
 8. Hold the otoscope in your right hand if you are examining the patient's right ear, and your left hand if you are examining the patient's left ear. Hold the otoscope like you hold a pen.
 9. The ear canal has a natural curve and is not straight. It points up and forwards, towards the eye. Using the hand that is not holding the otoscope, pull the pinna up and back to straighten the ear canal. In a young child pull the pinna straight back. Keep the pinna held during otoscopy.
 10. Insert the otoscope and speculum so that you can see the ear drum. Do not put the speculum in too deep. Ideally you should not need to insert more than half the length of the speculum into the ear canal. If you touch the skin of the deep ear canal (the skin without any hair) you might hurt the patient. You can put one finger on the cheek bone to keep the otoscope steady.
- Stop if the person experiences pain. This may be because you are not directing the speculum correctly or it is too far in. It could also be caused by infection of the outer ear.



11. Examine the ear canal, for discharge, swelling, wax, or other problems. See module 3 on the outer ear.
12. Look at the ear drum. If you cannot see the ear drum it might be because there is wax or pus in the way. It also might be because you are not looking in the right direction. Make sure you look forward and up (towards the eye).
13. If there is a lot of wax or pus you might need to perform ear washout or dry mopping. See Practical C and practical E.
14. Identify the structures of the ear drum. Is the ear drum normal? Is it red? Is there a hole (perforation)? Is it pulled in? Is there a cholesteatoma? See modules 4 and 5 on problems of the middle ear.



Normal eardrum



Small perforation in eardrum



Big perforation in eardrum

15. Use your examination findings, and the history to decide your diagnosis. The Appendix II will help you.
16. Clean it with cotton wool and disinfectant before starting and after completing the examination.

ADDITIONAL NOTES

- In young children it may be best to sit the child on one of the parent's knees and ask the parent to hold one side of the child's head against their chest while you do otoscopy. Then turn the child around and look in the other ear.
- You can accidentally damage the skin of the ear canal during otoscopy. If you do it will be painful and may cause bleeding. This will normally heal by itself.
- Sometimes you may not be sure what you are looking at. If you cannot see, but the patient has symptoms of ear or hearing disease, you should refer them to a specialist.

