

Otoscopic Examination



Disclaimer

A series of booklets has been developed by the Clinical Skills Lab team (staff, recent graduates and students) from the School of Veterinary Sciences, University of Bristol, UK. Please note:

- Each booklet illustrates one way to perform a skill and it is acknowledged that there are often other approaches. Before using the booklets students should check with their university or college whether the approach illustrated is acceptable in their context or whether an alternative method should be used.
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Equipment list:

Otoscopic Examination

Equipment for this station:

- Otoscope dog ear model
- Otoscope
- Otoscope speculum

Considerations for this station:

- Please ensure the otoscope is turned off after use (otherwise the battery will become flat and the otoscope will be unusable next time)

Anyone working in the Clinical Skills Lab must read the 'CSL_I01 Induction' and agree to abide by the 'CSL_I00 House Rules' & 'CSL_I02 Lab Area Rules'

Please inform a member of staff if equipment is damaged or about to run out.

Clinical Skills: Assembling the Otoscope

1



There are a variety of different makes of otoscope available in practice. These instruments may vary in power supply, size and how they are assembled.

To avoid dropping and damaging an expensive piece of equipment, it is important to know how to secure the head-piece to the handle before beginning an examination.

2



In the clinical skills lab the equipment in use is a 'Gowllands Otoscope Set'.

3



Start by attaching the head-piece to the handle of the otoscope.

The head-piece contains a light source and a magnifying lens.

4



With the Gowllands otoscope, align the notch on the handle with the notch on the otoscope head-piece.

5



Push the two components together.

6



Then gently push downwards on the otoscope head-piece and then twist it clockwise. This will lock the head-piece onto the handle.

To remove the head-piece: twist it anticlockwise and it is then automatically 'ejected'.

Clinical Skills: Assembling the Otoscope and Otoscopic Examination

7



Pick a speculum (cone) which is a suitable size for the patient. Ensure it is clean and dry.

8



The speculum is fitted onto the head-piece by slotting the groove on the speculum onto the raised dot on the head-piece and twisting to lock it into place.

Alternatively, on some otoscopes, the speculum is just pushed onto the head-piece.

9



Check the otoscope light works by turning the otoscope on.

To do this, turn the green dial at the top of the handle anticlockwise.

10



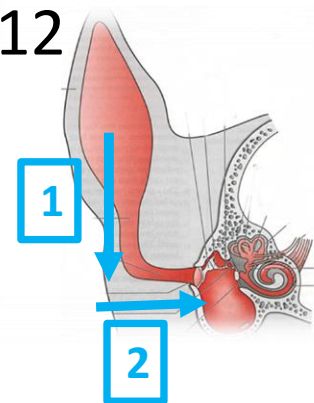
Before beginning the examination, it is important to remember that many ear conditions and infections can be painful so the ear pinna should be handled with care. Also, even the friendliest of dogs may respond aggressively to pain so the use of a muzzle should be considered.

11



Lift up the ear pinna with your non-dominant hand and examine the outer surface of the ear for evidence of inflammation. Smelling the ear may also be useful!

12



The ear canal is split into vertical (1) and horizontal (2) parts.

TIP: Start with the least irritated ear, or the ear the owner is less worried about.

Clinical Skills: Otoscopic Examination

13



With the otoscope in your dominant hand, gently introduce the tip of the speculum into the opening of the ear canal.

TIP: Looking down the otoscope reduces the chance of pushing the tip of the cone into the wall of the ear canal which may cause pain.

14



Slowly guide the speculum down the **vertical** ear canal. Look down the otoscope whilst advancing the speculum.

Continue to follow the vertical canal by looking through the otoscope and advancing down the canal.

15



To visualise the **horizontal** canal 'turn the corner'. The speculum will end up at 90° to the patient's skull.

Blue arrows show angle of speculum

TIP: To see along the horizontal canal the speculum must be at the same angle i.e. horizontal

16

When passing the speculum down the ear, notice the amount of wax and debris, which may appear purulent, in the canal.

N.B. Wax may fill the tip of the speculum and need cleaning to improve visualisation.

Also look for foreign bodies (e.g. grass seeds) and ear mites (*Otodectes cynotis*) which are just visible to the naked eye and associated with dark, almost black, wax.

Finally, assess the level of stenosis, erythema and ulceration of the ear canal.

17



At the end of the horizontal canal is the tympanic membrane. It can be visualised as a piece of flat, greyish and partially transparent tissue.

18



Slowly withdraw the speculum and wipe any debris with cotton wool or tissue to clean inside and out.

Repeat the examination on the other ear, ideally having disinfected the speculum or use a new clean speculum.

TIP: If the ear is very painful and/or stenosed, assessing the ear canal and visualising the tympanic membrane can be difficult. Consider performing the examination under sedation.

Resetting the station: Otoscopic Examination

1. Ensure the otoscope is turned off
2. Dismantle the otoscope - take the head-piece off the handle and the speculum off the head-piece
3. Place in box
4. In practice - clean the speculum (cone) after use

Station ready for the next person:



Please inform a member of staff if equipment is damaged or about to run out.

I wish I'd known: Otoscopic Examination

- Otoscopic examination can be painful, being careful and gentle is important. It is also helpful to warn the owner.
- Exudate from an ear examination can accumulate within the lumen of the speculum so just cleaning the outside of the speculum is not sufficient. Practices may use speculum cleaners which are filled with disinfectant and contain brushes which remove the debris.
- If the speculum is kept in cleaner fluid, it must be washed to ensure no harmful chemicals are introduced to the ear canal.
- Start with the healthy ear to prevent spreading infection from one ear to the other; it is also non-painful and easier to examine.
- When examining the ear canal it may be easier with small dog breeds such as terriers to place the dog on a table; larger breeds may be easier to examine on the floor.
- When examining the ear gentle restraint should be provided by an assistant e.g. a nurse or the owner. The assistant stands on one side of the dog and places one hand behind the head to prevent the dog moving its head backwards and their other hand is cupped under the muzzle. The vet stands on the other side of the dog and examines the ear canal. To examine the other ear it is best if the assistant and vet to swap sides.
- If the ear is very painful or the patient is difficult to examine, it may be preferable to perform the examination under sedation.
- It may be helpful to gently lift the pinna upwards - this will increase the angle of the vertical and horizontal parts of the canal (i.e. opens up the angle between the parts) so that it is easier to slide the speculum down the ear canal.
- When looking along the horizontal canal the speculum must be horizontal i.e. at the same angle as the canal.