

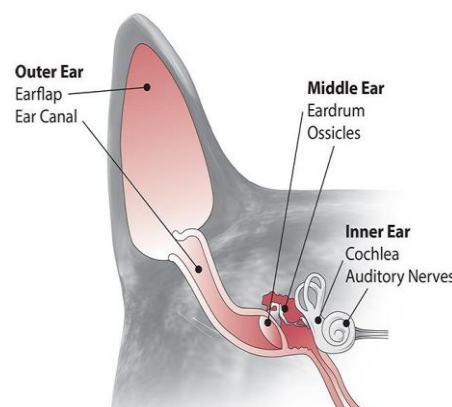
Pre-Operative Information: Total Ear Canal Ablation (TECA)

Price: £2,500 (including VAT @ 20%) per ear

Sometimes chronic ear problems are simply hopeless, or what we refer to as 'end stage'. Organisms causing infection in the ear may be too resistant for treatment, the ear canal may have become hard and mineralised from chronic irritation, or the ear canal may be so scarred and narrowed that cleaning is futile. This degree of irreversible disease requires surgical treatment. Total Ear Canal Ablation (TECA) and Bulla Osteotomy (BO), often referred as TECA for short, involves removal of the diseased ear canal along with the lining and bones of the middle ear, whilst leaving the outer part of the ear (the ear flap or 'pinna') and inner ear (the hearing organ itself) in place. This ends what has generally been a long-standing tribulation of pain, odour, ear cleaning, and expensive veterinary medications and re-examinations.

The ear comprises three main parts:

1. The **outer ear** includes the pinna (or ear flap), which picks up the sound, and the ear canal which funnels the sound down to the ear drum.
2. The **middle ear** is a bony air-filled cavity in the skull (*tympanic bulla*), lined with a secretory layer of cells. Three tiny bones (called ossicles) pass the sound vibrations from an outer membrane (the ear drum) across to an inner membrane.
3. The **inner ear** lies on the other side of this inner membrane. The cochlea and auditory nerves of the inner ear are the part of the brain which makes up the hearing organ itself.



Canine ear disease usually occurs due to inflammation of the skin that lines the ear canal (*otitis externa*) which can lead to secondary infection of the middle ear chamber (*otitis media*).

In the majority of cases, inflammation of the skin within the ears is part of a more generalised skin condition; pets suffering from ear problems often experience irritation elsewhere. More severely affected pets can suffer from clear evidence of skin allergy over other parts of their body, in addition to the ear disease.

The reason that the ears are often more severely affected by this generalised skin irritation than other areas of the body, is because of the environment within the ear canal. Initially the hypersensitivity or skin allergy causes a low level of inflammation which allows bacteria and yeast organisms that normally live on skin to increase in numbers. In mildly affected dogs, most areas of the skin can avoid significant organism overgrowth, but the moist and warm environment within the ear canal provides the ideal environment for these organisms to grow and therefore cause further inflammation. As the organisms increase in numbers, their presence causes further inflammation and damage to the skin, leading to **a vicious cycle of deterioration**. As the infection and inflammation progress, the ear canal becomes irreversibly narrowed, and the middle ear chamber can become filled with infected material.

The key to **successful management of ear disease** lies in control of the bacteria and yeast organisms within the ear canal and soothing the inflammation, at the same time as addressing the initial cause of the irritation. Initial treatment aims to break this vicious cycle; ear cleaning and flushing, ear preparations containing antibiotics, antifungals and anti-inflammatories and systemic (oral) antibiotics and /or anti-inflammatory medications all form part of our medical arsenal to treat ear disease. However, treating the initial or underlying cause will usually involve recognition and correction of predisposing factors that may be present in the patient. This may require allergy testing or dietary management to reduce the level of allergic inflammation in the skin.

TECA surgery is an 'end stage' or salvage procedure and is reserved for those cases that cannot be managed satisfactorily by medical means. The operation involves the removal of the entire ear canal. The pinna (ear flap) and inner ear (hearing organ) are left in position. Following removal of the diseased ear canal, part of the bony wall of the tympanic bulla (middle ear) is also removed (*Bulla Osteotomy*) to facilitate removal of the secretory lining and infected material from the middle ear chamber. Once the wound is closed there is no longer an 'ear hole'.

What is included?

At Oakhill Vets we strive to ensure our surgeries are 'all inclusive'. Our TECA surgery INCLUDES the following:

- Pre-anaesthetic blood screen (as required)
- Pre-operative X-ray assessment of ear canals and tympanic bullae (as required)
- Hospitalisation (up to 24 hours)
- Intravenous fluids during the anaesthetic and surgery
- General Anaesthesia
- Surgery (total ear canal ablation and bullae osteotomy)
- Post-operative medication (for up to two weeks)

What is not included?

Culturing for bacteria of samples taken is strongly recommended prior to surgery. This helps ensure the patient is on an effective antibiotic right from the beginning. Sampling of the tissues deep within the ear canal for bacterial culture and histology may be indicated at the time of surgery. The cost of pre- and intra-operative ear cultures and histopathology is not included in the cost of TECA surgery.

When preparing for TECA surgery radiographs to assess the tympanic bullae are helpful to know before surgery how bad the tympanic bullae look, how narrowed the ear canals are and if they are mineralized, and if there is an obvious tumour growing. These images help confirm that this very aggressive surgery is really appropriate for this patient. In some cases, where x-rays do not provide sufficient detail, a CT (Computer Tomography) scan is required for TECA pre-operative planning. We are currently unable to offer CT at Oakhill, but are happy to discuss such cases and direct you to a Specialist who can help. While we endeavour to give you an up-front, all-inclusive estimate of costs, when it comes to pets recovering from TECA surgery there is unfortunately an element of unpredictability. The tympanic bulla and the very bottom of the ear canal share space with some important structures. These structures can easily be damaged during surgery or by the inflammation that results during the healing process. Complications, some of which may incur additional costs, include (but are not limited to):

- Important blood vessels are located the ear canal that is being removed. If damaged, the pinna may lose part of its blood supply. This tissue may die along the margin of the pinna and trimming may be necessary.
- The facial nerve is also located very close to the ear canal. If the facial nerve is disturbed, a facial paralysis may result. This is one of the more common complications of TECA but it is usually temporary (facial paralysis after surgery is permanent in 10-15% of cases where it occurs).
- Sometimes there is enough swelling around the throat to make breathing laboured for a period post-operatively.
- Approximately 5-10% of TECA patients experience chronic drainage from the incision and may require a second surgery to repair the problem.
- Hearing is likely to be diminished after surgery although after years of intractable ear disease, hearing is likely diminished already. Hearing should be assumed to be disrupted with this surgery, despite removal of the ear drum. Some dogs are able to hear sounds at normal volumes after the TECA surgery. It is not possible to predict how much more hearing loss an individual will experience after TECA.

Payment Options

Payment is expected in full at the time of consultation or upon discharge from Oakhill Vets. If your pet is insured we would request that you pay for their treatment and claim the funds back from your insurance company. Once you have settled the cost of any treatment we can help you complete your insurance claim form(s) at no additional charge. Direct claims may be arranged with some insurance companies and are subject to a check with our referral coordinators prior to your appointment. An administration fee is chargeable each time a direct claim is carried out by our referral coordinators. If you have any concerns about payment then please contact us prior to your consultation.

Why choose Oakhill Veterinary Referrals?

Oakhill Vets is based in Windermere in the beautiful Lake District. We are happy to take referrals from clients further afield. Let our friendly, highly skilled and experienced team of Veterinary Surgeons and Registered Veterinary Nurses look after your pet while you relax and enjoy a short break in The Lakes. For more details please phone the practice and speak to one of our helpful referral coordinators on 015394 88555.