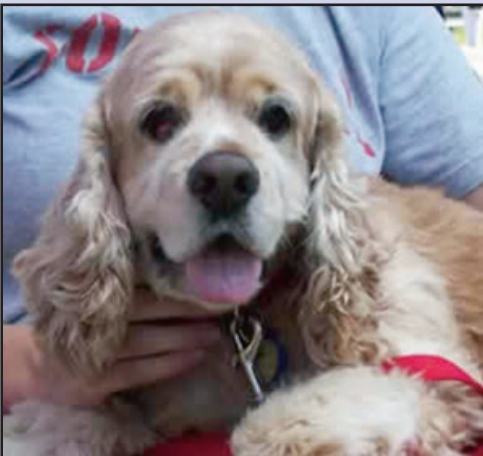


Post-Operative Care

None of the surgical procedures discussed affect the ear pinna directly. However, if your pet has erect ears, a cosmetic change may be noted after the vertical canal ablation or TECABO. The earflap will be pulled slightly closer to the head, but pet owners normally do not object to this minor alteration. The length of hospitalization will vary with the surgery performed and can range from 1 to 3 nights. A bandage may be placed over the ears after the vertical canal and TECABO procedures. The bandage may remain in place for up to 3 days and may need to be changed. Once the bandage is removed some animals will paw at their ears, requiring placement of an Elizabethan collar. Suture removal is performed approximately 10 to 14 days after surgery.

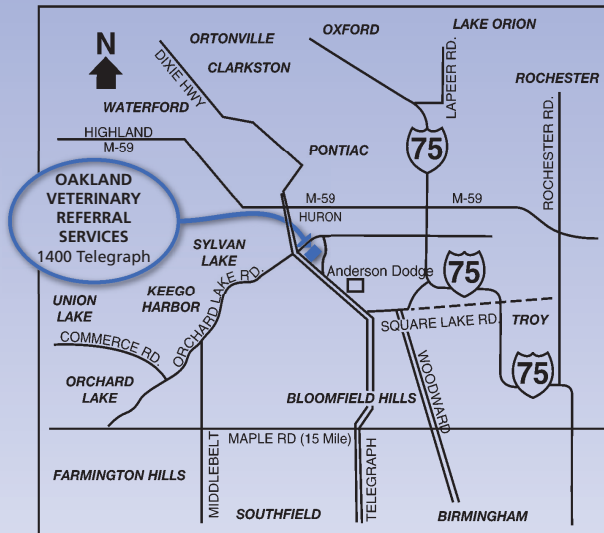
Often the decision of whether to pursue surgery on your pet's ears is very difficult. These are generally long-standing problems, and you need not rush into a decision. We are happy to offer our opinion regarding your pet's need for surgery and which surgery is best suited for your pet's problem. It is not unusual for owners to report that their dog is acting like a puppy again and is much more playful and comfortable after surgery.



Specialty veterinary medicine is a relatively new advancement in pet care. Similar to specialists in human medicine, board-certified veterinary specialists focus their education and services in one specific area.

Have you been referred? Things to bring at the time of your consultation:

- Recent radiographs and blood work
- Medications your pet is being given



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Oakland Veterinary Referral Services



SURGERY

**Surgical Ear
Diseases**

Chronic ear infections (otitis) are a commonly diagnosed and often frustrating disease seen in dogs and less often in cats. Most often the problem begins in the ear canal and is called otitis externa. In long-standing infections, the disease may extend through the eardrum into the middle ear, producing otitis media as well. Most chronic or recurrent ear infections involve both the external and middle ear.

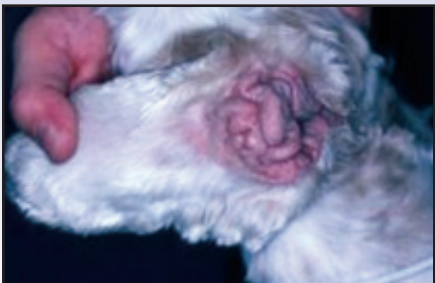
The earflap is called the pinna and is generally unaffected by the condition. The external ear canal in small animals is shaped like an "L". The vertical portion opens to the outside and is visible when you lift up the pinna. The horizontal portion starts at the bend of the "L" and continues to the level of the eardrum. The bony portion which houses the middle ear is called the bulla.

Causes of Otitis

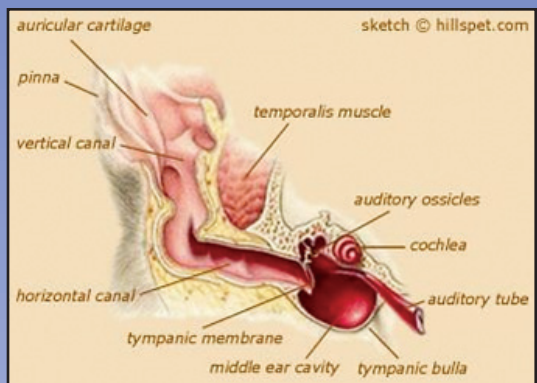
There are numerous causes of otitis. The external ear canal is an extension of the skin and as such is affected by conditions that cause changes in the skin. Often diseases such as allergies or alterations in normal metabolism such as low thyroid hormone levels (hypothyroidism) can predispose dogs to recurrent or chronic otitis externa. These conditions change the environment of the ear canal and allow proliferation of the bacteria and yeast often found in the normal ear. Your veterinarian may recommend identifying underlying causes for the otitis to maximize the benefits of medical treatment. Unfortunately, once the disease becomes very severe, surgery may be the only treatment option.

Symptoms of Otitis

Dogs with otitis will exhibit head shaking, pawing at the ears, or pain when the ears are handled. Often the inside of the ear is moist, reddened, and has a strong odor. As the condition progresses the ear canals may begin to feel hardened and may be more prominent. This is from calcification of the ear canal cartilage (see below). Additionally, the



opening of the ear canal may swell shut. If otitis media is present, pain may be noted upon opening of the mouth.



Anatomy of the ear canal

Pre-Surgical Evaluation

Your veterinarian will make a recommendation regarding possible need for surgery based on the length of time the ear disease has existed, response to treatment, and direct examination of the ears. An otoscope is used to examine the ear canal. A thorough otoscopic examination may be uncomfortable for your pet, necessitating the use of sedatives or anesthesia. Often blood work is required prior to anesthesia to evaluate your pet's overall health and identify underlying problems. Prior to surgery, a CT scan or radiographs of the bulla are performed to evaluate the middle ear.

Surgical Treatment

Surgical treatment for ear disease may be necessary if other attempts at managing the otitis are ineffective. Surgery may vary from removal of a portion of the ear canal to complete removal of the ear canal and cleaning of the bulla. Surgery is frequently the first choice of treatment for tumors or congenital malformation of the ear canal.

Vertical Canal Ablation

This procedure involves removal of the vertical portion of the ear canal while leaving the horizontal canal intact. The horizontal canal opening is sutured directly out to the skin, just below the original ear opening. This procedure is rarely indicated as it is only useful for conditions isolated to the vertical canal, such as with benign tumors. It is considered an ineffective treatment of otitis, as the disease process persists in the horizontal canal, causing the canal to swell shut and requiring further surgery.



Total Ear Canal Ablation & Bulla Osteotomy (TECABO)

This is the most common surgery performed for the treatment of chronic otitis. It is indicated when the changes to the ear canal are irreversible and involve the entire canal. A TECABO is also indicated for tumors involving the horizontal canal. It entails removal of the entire ear canal (both the vertical and horizontal portions). There is no opening left to the outside, therefore postoperative application of ear medications or cleaning are not required. The surgeon will perform a bulla osteotomy to open and clean out the middle ear at the same time. This prevents the infection from remaining in the middle ear, a condition that could produce postoperative draining tracts and require further surgery. The TECABO is a very difficult procedure; but when performed by an experienced surgeon, the success rate is very high.

The surgeon will collect a culture from the middle ear at the time of surgery and place your pet on appropriate antibiotic therapy. The antibiotic may need to be changed several days after surgery based on the culture results. A rubber drain tube is placed in the middle ear at the time of surgery and exits the skin just below the surgical site. The drain will be removed sometime during the week after surgery. Hearing loss is expected after a TECABO, however most animals are deaf prior to surgery and most owners do not report an appreciable change post-operatively. Damage to the facial nerve and loss of blink reflex may also occur after a TECABO. This problem is generally temporary and does not require treatment. Rarely, a head tilt or nystagmus occur post-operatively and often resolve with time.