

CANINE AND FELINE OTITIS

WHAT IS OTITIS?

Otitis is an inflammation of the auditory canal, which can be acute or chronic.

It is one of the most common diseases in clinical veterinary medicine, affecting:

- Up to 20% of dogs.
- 6% of cats.

WHAT ARE THE MAIN CAUSES OF OTITIS?



Allergies



Heat



Humidity



Excess wax



Ear mites (*Otodectes cynotis*)



Foreign body



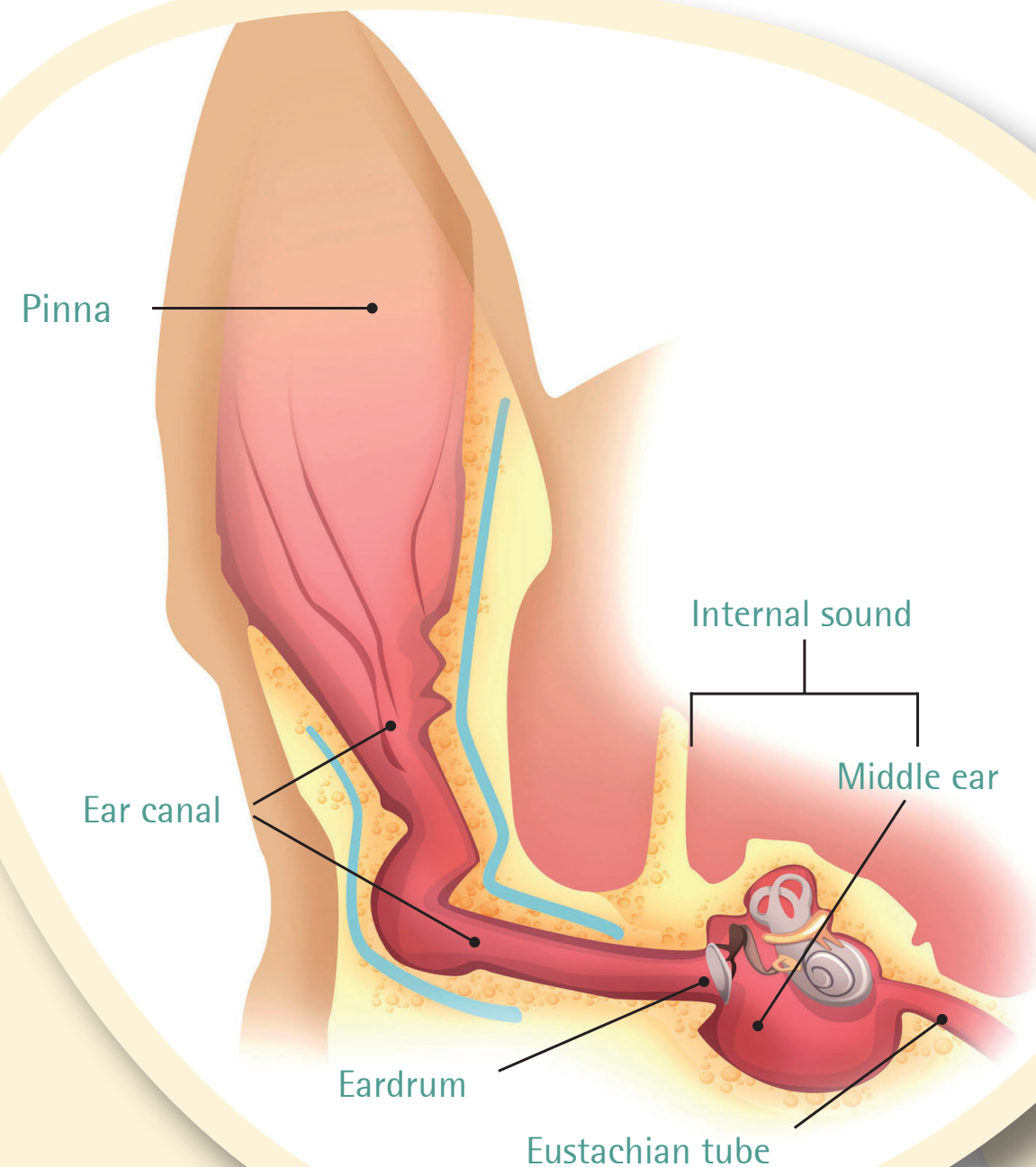
Epithelial overgrowth

Secondary factors: They do not cause otitis in normal ears but they contribute to or cause an additional pathology and an ear that is already affected:

- **Bacteria:** *Pseudomonas*, *Staphylococci*, etc.
- **Yeast:** *Malassezia*, *Candida*.

Perpetuating factors: in response to established otitis.

- Calcification, fibrosis, hyperplasia, otitis media.



SYMPTOMS OF OTITIS

- Shaking the head frequently
- Scratching the ears
- Smell or discharge from the ears
- Red and irritated ears

HOW DO YOU PREVENT OTITIS AND EAR INFECTIONS?

- Clean their ears regularly
- Keep their ears clean and dry by using ear cleaners such as NACOTIL®



NACOTIL®

OTITIS EXTERNA

FACTORS AND CAUSES THAT CONTRIBUTE TO THE PHYSIOPATHOLOGY OF OTITIS EXTERNA

Characteristics	Examples
PREDISPOSING FACTORS	
Characteristics of the animal itself that increase the risk of OE	<ul style="list-style-type: none">Abnormally slim or small EAC (e.g. Shar Pei)Excess humidity in the EAC (e.g. breeds with dangling ears)Hypertrichosis in the EAC (e.g. toy)
PRIMARY CAUSES OR TRIGGERS	
Direct causes of OE	<ul style="list-style-type: none">Allergic diseases (food allergies, atopic dermatitis)Endocrine diseases (hypothyroidism)Parasites (<i>Otodectes cynotis</i>, <i>Demodex canis</i> etc.)Trauma (iatrogenic or motor vehicle accident)
SECONDARY CAUSES	
Contribute to or cause otitis external in abnormal ears or where there are predisposing factors	<ul style="list-style-type: none">Bacteria (<i>Pseudomonas Aeruginosa</i>, <i>Staphylococcus spp</i>, <i>Streptococcus spp</i>, <i>E. coli</i>, <i>Proteus spp</i>, <i>Klebsiella spp</i>)Yeast (<i>Malassezia pachydermatis</i>)
PERPETUATING OR AGGRAVATING FACTORS	
Prevent the resolution of otitis externa. Related to the structural and inflammatory changes which occur in the ear associated with chronic pathological processes	<ul style="list-style-type: none">LichenificationHyperkeratosisSebaceous hyperplasiaUlcerationTumorsOtitis media

DIAGNOSIS OF OTITIS EXTERNA

The EAC (external auditory canal) is considered to be a specialized extension of the skin, and therefore OE is considered to be a dermatological problem.

- 1 General dermatological examination, particularly of the ear
- 2 An otoscopy as a minimum
- 3 Direct examination
- 4 Cytological study of the exudate
- 5 And chronic and recurrent bacterial otitis, culture and antibiogram

TREATMENT FOR THE EARS

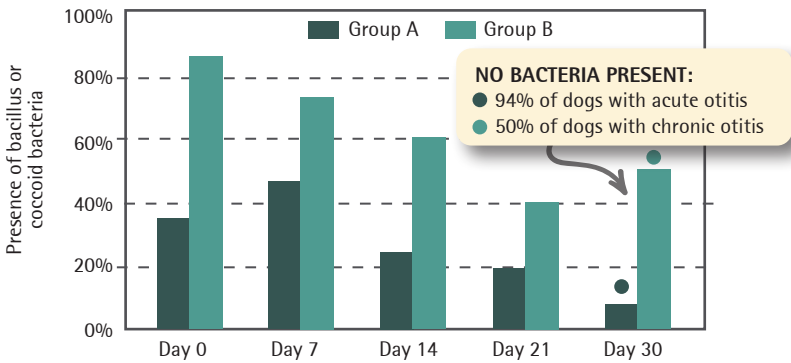
- 1 Identification of predisposing and primary factors
- 2 Cleanliness of the EAC (external auditory canal)
- 3 Topical therapy
- 4 Occasionally systemic therapy
- 5 Education of the owner, then prevention and maintenance

GOOD CLEANING IS KEY

LCleaning and drying the EAC is an essential part of the evaluation and treatment (Rosychuk & Luttgen, 2000; Scott et al., 2001). Cleaning enables the EAC to be better explored, reduces the microbial population and its sub-products such as toxins and enzymes, facilitates the application of the topical drugs in their action site, increases the efficacy of the topical medications (some of which may be inactivated by exudate) and has a certain calming effect. The detritus which is not removed may act as little foreign bodies and perpetuate the infection. After washing, a "cleaning" is needed to remove the exudate and the microorganisms perpetuating the infection.

RESULTS

DERMATOLOGICAL USABILITY STUDY¹



GROUP A: dogs with acute otitis
GROUP B: dogs with chronic or recurrent otitis.

The quantity of bacteria in total in the cases treated with Nacotil® is insignificant 10 days after the treatment. Statistically significant reduction ($p < 0.0001$)

¹Varela L. et al, Estudio de usabilidad dermatológica del limpiador ótico NACOTIL® en Veterinaria, (2019) Oct 11, OPK-NAC-2018-01.

NACOTIL®

Active ingredients:

- NAC (N-acetyl cysteine)
- Boric acid
- Hyaluronic acid
- Zinc gluconate
- Essential *Citrus Limonum* oil

NACOTIL® RECOMMENDED FOR:

- Regular hygiene of the pinna and the external ear.
- Can be used for cleaning with or without a perforated ear drum (not toxic to the ear).
- Pre-cleaning of any previous application¹.
- Helps to prevent the formation of biofilms.
- Helps to keep the epithelium of the auditory canal in normal physiological conditions.
- Helps to create a clean and dry environment.

NACOTIL®

SEVERAL LAYERS OF ASSISTANCE FROM JUST 1 CLEANER



Nacotil® has demonstrated that it can assist with the elimination of pathogenic organisms, acting as a cleaning agent, antioxidant and bacterial biofilm disruptor in canine otitis¹.



Information exclusively for the healthcare professional.