

It's been said that there are two kinds of dogs. Those that have ear infections, and those that don't have ear infections...yet.

In humans, typically children, ear infections (otitis) usually involve the middle ear, just inside the eardrum. This is referred to as otitis *media*. Unlike people, dogs don't often get otitis *media*; instead our canine friends more commonly get otitis *externa*.

As the name implies, otitis *externa* involves the external ear canal, the long skin lined tube that connects the eardrum to the visible outer ear opening on the side of the head. Your dog's ear infection is often treated quite differently from that of your child's because they're totally different problems. Nonetheless, both are commonly called "ear infections".

So what causes ear infections in dogs? It should come as no surprise that the canine ear canal is not a sterile environment. In fact it plays host to all kinds of microbes (bacteria, fungi, etc.) collectively called the "normal flora". As long as normal immune defense mechanisms of the ear canal do their job, the number of microbes that make up the normal flora remains very small and the ear canal, and presumably the dog and the dog owner, remain happy.

When the normal immune defense mechanisms of the ear canal are compromised some of the normal flora organisms (usually fungal organisms called "yeast") reproduce rapidly resulting in large numbers of these normally benign organisms. In large numbers these organisms can cause the ears to be inflamed, itchy and sometimes painful.

So what causes the normal immune defenses of the ear canal to be compromised? Excess moisture in the ear canal from swimming or bathing, allergy (hay fever), and foreign objects in the ear such as foxtails, are the most common culprits. Occasionally, internal illnesses such as low thyroid gland function and other endocrine issues can predispose to ear problems as well.

Head shaking, pawing at the ear, crying when the ear is touched, or tilting the head to one side are all signs of an ear infection in dogs. In the severely infected ear, you'll often smell the problem before you see it. In milder otitis *externa*, which is more common, you may not notice any symptoms at all.

To successfully treat otitis *externa* we need to determine the type(s) of offending microbe(s), again commonly these are yeast organisms, but sometimes bacteria or ear mites are the perpetrators. We use a microscope to inspect a sample of the discharge from the infected ear that is smeared onto a glass slide. With appropriate staining, the type of microbe is fairly easy to identify. Next a gentle safe cleaning or flushing the ear canal is needed to remove as much debris as possible. Finally we treat with an appropriate medication based on what's causing the infection.

Don't discount the importance of careful and appropriate cleaning of the infected ear before treating. Occasionally a pet owner will call and request medication for their dog's ear infection. What they're forgetting is that all that goopy, smelly debris acts like a sealant on the surface of the ear canal, effectively shielding the infected tissue from the medication. Additionally, there may be a foxtail or some other problem in the ear that will not respond to simply applying medication. If the eardrum is ruptured, for instance, certain medications may actually make things worse.

Over-the-counter ear care products are not usually effective, and may create more problems than they help. Your veterinarian is best suited to safely clean or flush your dog's ear(s) and prescribe effective treatment. In some cases the doctor may need to

sedative or even anesthetize your dog to allow for a safer and more thorough ear cleaning.

So what kind of dog do you have? One that has an ear infection, or one that doesn't have an ear infection...yet? With canine ear infections being so common, it's wise to monitor your dog's ears carefully and seek your veterinarian's advice if any concerns arise.

*Dr. John Huebner practices companion animal medicine at Redwood Veterinary Hospital in Vallejo, CA. You can send your comments or pet health questions to Dr. Huebner at 731 Admiral Callaghan Lane Vallejo, Ca 94591, or e-mail him at RdWdVet@yahoo.com*