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VESTIBULAR DISEASE IN PETS

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The vestibular apparatus is the body's system for determining our orientation to our surroundings. It lets us know when we are upright, upside down, whether we are leaning to one side, or backwards, etc. When there is a disruption of the vestibular system the body has a difficult time assessing its orientation, and therefore vertigo or dizziness is the result.

Anatomically the vestibular system is comprised of components in the inner ear which collect information using fluid filled cells and fine neurological hair cells linked to the nerves that are connected to the brain. Disruption of the system can occur in any one of these locations: the inner ear, the nerves that lead from the inner ear to the brain, and the brain. Therefore, there are multiple possible causes for vestibular disease in the dog. Typically, these are classified into two different sub types 1) Central – anything related to the central nervous system (brain and nerves) or 2) Peripheral – anything related to ear/inner ear.

Central vestibular disease can be caused by anything that disrupts the portion of the brain that controls the vestibular center. Therefore, something like hypothyroidism, a vascular event (stroke), brain tumor, infectious/inflammatory disease, or other types of brain lesions can all cause the same clinical signs if they are in the vestibular center of the brain.

Peripheral vestibular disease can be caused by an inner ear infection. Another type of peripheral vestibular disease is commonly known as "old dog vestibular" or "geriatric vestibular" disease. The exact pathophysiology of this type of vestibular syndrome is unknown, but it is believed to be a result of abnormal flow of the endolymphatic fluid in the semicircular canals of the inner ear.

Clinical signs of both central and peripheral vestibular disease can look very similar. Sometimes they are indistinguishable, yet sometimes only small clues during a veterinarian's physical exam can help to distinguish between the two. The most common signs are nystagmus (rapid eye movement in a horizontal, rotatory or vertical direction) head tilt, ataxia (wobbly walking), leaning against walls, falling over, or even rolling to one side on the floor. In the dog, these signs all seen together are considered quite characteristic for this particular condition. Cats can also get Vestibular disease, but it is far less common.

Treatment of vestibular disease will depend on the underlying cause. For most patients the mainstay of treatment involves keeping the pet comfortable. Since vertigo/dizziness is expected, patients will likely have some degree of nausea or decreased appetite. Anti-nausea medications coupled with a bland diet can be very helpful if there is vomiting or anorexia. If a veterinarian finds signs that are suspicious for possible central vestibular disease then a referral to a Neurologist for an MRI might be indicated. If an inner ear infection is found then treatment with oral antibiotics may be warranted. The most common cause of vestibular disease in dogs is "old dog" or "geriatric" vestibular disease. There is no specific treatment for these cases beside supportive care. Fortunately, this type of vestibular disease tends to resolve on its own within a short time. It usually has a very sudden onset and fast recovery, only lasting a few days. If signs are not resolving after a week or more, further testing (MRI) may be indicated. 