

Why Your Dog Might Be Stumbling

Explore the deeper cause of your dog's head tilting and disorientation. From inner ear troubles to more complex neurological issues, find out what could be troubling your four-legged friend and how to address it.

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STORY AT-A-GLANCE

- Vestibular disease is a disorder that affects a dog's body balance systems; the most common type is the peripheral form, which occurs outside the central nervous system
- The causes of peripheral vestibular disease are varied, but all can irritate or damage the nerves of the inner ear and cause inflammation
- Symptoms include nausea, vomiting, head tilting, loss of coordination, and jerky eye movements
- Resolving peripheral vestibular disease relies on resolving any identified underlying cause; treatment of idiopathic disease is focused on an integrative approach to manage specific symptoms and provide supportive care

Your dog's ears contain the vestibular system — a collection of structures in the inner ear that gives him his sense of balance and spatial orientation, meaning a sense of whether he's right-side-up or upside-down. Without a functioning vestibular system, your dog's brain wouldn't have the information it needs to understand the body's relationship with the external environment.

Vestibular disease is a disorder that affects the body's balance systems. The peripheral form of the disease occurs outside the central nervous system (brain and spinal cord) and is caused by disorders affecting the inner ear. Central vestibular disease is a much less common and more serious form and originates inside the central nervous system.

Peripheral vestibular disease occurs when there's irritation to the nerves connecting the inner ear with the brain. Dogs with the condition have symptoms that can look quite dramatic to a dog parent, especially the first time they occur.

Signs of vestibular disease include:

- Head tilting
- Loss of coordination
- Circling and stumbling or staggering
- Falling and rolling
- Involuntary, rhythmic, jerking eye movements — a condition called nystagmus

Dizziness and loss of balance can cause excessive drooling, nausea and vomiting. If the disease affects only one ear, head tilting and circling will be in the direction of the affected ear. If only one side of the head is involved, only the eye on that side may develop nystagmus.

Congenital vestibular disease, which is rare, usually presents between birth and 3 months of age. Breeds predisposed to the condition include the German Shepherd, Doberman Pinscher, Akita, English Cocker Spaniel, Beagle, Smooth Fox Terrier, and the Tibetan Terrier.

Vestibular disease in senior and geriatric dogs is often mistaken for a stroke. The vertigo caused by the disease can be particularly intense in older dogs, with symptoms of nausea, difficulty or complete inability to stand up, head tilt, nystagmus, and circling. It can even make eating and drinking and going outside to potty very difficult or even impossible.

Causes of Vestibular Disease

Peripheral vestibular disease can have a number of causes, including:

- Chronic and recurrent inner and middle ear infections (the most common cause)
- Overzealous cleaning of the ears resulting in a perforated or ruptured eardrum
- Trauma from a head injury
- **Stroke**
- Tumors or polyps
- Meningoencephalitis
- Hypothyroidism
- Certain drugs (e.g., aminoglycoside antibiotics, including amikacin, gentamicin, neomycin, and tobramycin)
- Loop diuretics
- Ear cleaners that should not be used with ruptured eardrums

As varied as these causes are, each can irritate or damage the nerves of the inner ear and cause inflammation.

Peripheral vestibular disease can be present from birth as a congenital defect. In older dogs, it can come on quickly and be idiopathic, meaning we can't identify the cause.

An infection of the middle ear is by far the most common reason for peripheral vestibular disease in younger dogs. It's important to note that dogs with ruptured eardrums should not have ear cleaners or solutions put in their ears, as this can make the situation much worse. In older dogs, unfortunately, there's a greater possibility that a **brain tumor** is affecting the vestibular system.

Causes of central vestibular disease, the less common form, include inflammatory disease or infection within the central nervous system, trauma or bleeding in the brain, loss of blood flow, and cancer.

Diagnosing Vestibular Disease

A physical exam including a neurologic assessment will determine if the vestibular disease is peripheral or central. If the much more common peripheral form of the condition is identified, an otoscope will be used to look deep into your pet's ear for an infection.

Sometimes X-rays are needed. Blood tests, a culture and sensitivity test, and cytology are all required to help eliminate other potential causes for your dog's symptoms.

If there's no ear infection, your veterinarian may recommend additional diagnostics such as a magnetic resonance imaging (MRI) scan or computed tomography (CT) scan, to identify potential tumors in your dog's brain.

If **hypothyroidism** is determined to be the root cause, managing that metabolic condition with oral medication will resolve the vestibular symptoms. If a medication is the root cause, discontinuing the drug can bring about complete resolution of symptoms, but it can sometimes leave animals with permanent hearing loss.

If the condition is determined to be central vestibular disease, usually an MRI or CT scan, as well as spinal fluid taps, may be needed to identify the root cause. When all identifiable causes of vestibular disease are ruled out, we call the condition idiopathic.

Treatment Options

At this time there's no treatment for idiopathic vestibular disease, so the goal is to manage the dog's specific symptoms and provide supportive care as needed until they resolve.

Fortunately, puppies born with the condition often adapt and are less affected as they get older. In old dogs, vestibular disease usually resolves in one to two weeks, though the tendency to head-tilt can be permanent.

The nausea and vomiting often caused by the condition can be alleviated with motion sickness medications. However, the drugs currently used — metoclopramide and maropitant — typically manage vomiting, but not nausea. A 2021 study evaluated the use of the drug ondansetron to eliminate both nausea and vomiting in dogs, along with motion sickness.¹

The study involved 16 dogs with nausea due to vestibular disease; only a third of which also had vomiting. The intensity of nausea-like behaviors (e.g., salivation, lip licking, restlessness, lethargy, vocalization) was measured before and 2 hours after ondansetron administration. The occurrence and frequency of most behaviors were significantly reduced in 11 dogs at the 2-hour mark; however, the level of vocalization didn't change.

There are several different homeopathic remedies that, depending on the dog's symptoms, can speed recovery. Acupuncture can also be incredibly beneficial for these animals because it works on the body's electrical system. Beneficial rehabilitation therapies can help vestibular disease patients learn better body awareness and improve their physical stability.

If your dog feels dizzy, it can prevent her from walking normally or at all, so food and water may need to be placed in close proximity to her to encourage her to eat or drink. Some dogs even need to be hand-fed until they're feeling better.

In a worst-case scenario, your dog may refuse to drink anything at all, so your veterinarian will need to give subcutaneous fluids until things improve. Many dogs also need help getting on their feet and going back and forth to their potty spot.

This condition is extremely stressful and confusing for dogs, which is why keeping a very dizzy and disoriented pet in a confined, well-padded location such as a crate or exercise pen can be helpful. Provide nice, thick bedding and keep the environment quiet and dimly lit.

Natural calming agents like the amino acid L-theanine can be beneficial, as can **cannabidiol (CBD) oil** and herbs like passionflower, hops, skullcap, valerian and chamomile. Other remedies such as tryptophan, gamma amino-butyric acid (GABA), essential oils and flower essences can also help calm overwhelmed dogs.

Central vestibular disease has a poorer prognosis than the more common peripheral form, primarily due to the potential damage to the brainstem, which sadly can be devastating.

Fortunately, the most common form of canine vestibular disease is the peripheral form. The vast majority of cases improve quickly once the underlying cause is addressed, and the symptoms of vertigo are managed with excellent supportive care.

Sources and References

[Clinician's Brief, January 2022](#)

¹ [Foth, S. et al. BMC Vet Res. 2021 Jun 21;17\(1\):222](#)
