

On the Level

Spring 2011
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Quarterly Newsletter of the Vestibular Disorders Association

Vestibular Disease in Dogs and Cats

Vestibular disorders are not unique to humans. All higher animals that have a vestibular system—from fish to mammals—can be afflicted, including cats and dogs.

The vestibular (inner ear) organs provide the brain with vital information about body position with respect to gravity. Sensory information from the vestibular system tells dogs and cats if they are upside down, right-side up, tumbling, turning, falling, or accelerating. Information from the vestibular system also coordinates with sensory information from vision and proprioception (touch sensors in the paws and other parts of the body) to help your pet maintain balance and have clear vision while moving. When vestibular dysfunction occurs in dogs or cats it is most often associated with the peripheral system (inner ear) rather than with the central system (brain).

How do I know if my pet has a vestibular problem?

Signs of vestibular disease in pets can include:

- Circling (spinning or walking in circles)
- Standing with an exaggerated wide stance
- Head tilting (see Figure on page 3)
- Falling or rolling to one side
- Nystagmus (involuntary drifting eye movements)
- Squint or strabismus (abnormal position of the eyeballs)
- Ataxia (stumbling, staggering, or lack of coordination without weakness or involuntary spasms)
- Head shaking
- Vomiting
- Motion sickness—perhaps evident when your dog is no longer an enthusiastic backseat companion on car rides

Other behavioral changes may be apparent. For example, a cat's swift and graceful movements may become hesitant and awkward. A dog that is disoriented when looking down may rest on his belly in front of the water bowl to drink rather than stand to slurp from it as usual.

In addition, your pet may opt to sleep on the floor rather than on his pillow or a sofa because the hard unyielding surface will

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help him to reduce being awakened by the vestibular signals triggered with subtle head movements and position changes in sleep. This is because the vestibular system sends information to a part of the brain called the *reticular formation*, which is involved with self-regulation of wakefulness—in part, a monitor for survival. For example, if you or your pet were to start falling off of a bed while asleep, sensory signals sent from the vestibular system to the reticular formation would stimulate arousal.

The activity in the reticular formation with specific head and body movements is why veterinarians will hasten an animal's recovery from anesthesia by rolling the animal from side to side. Similarly, your pet may not sleep soundly if his brain receives false or exaggerated sensory information from his malfunctioning vestibular system about movement and spatial orientation.

Causes

Peripheral vestibular dysfunction in dogs and cats is usually of unknown (idiopathic) origin. Less common causes are middle ear infection (e.g., from a severe ear mite infestation), ototoxicity from certain types of antibiotics (e.g., streptomycin or gentamicin), genetic sources, and head trauma. An underactive thyroid gland or central problems (brain lesion) can also create vestibular dysfunction in pets.

The term *old dog vestibular syndrome* has been used to describe a disturbance of unknown (idiopathic) origin in the inner ear balance system in dogs. However, such inner ear disturbance can occur in dogs of any age, so the term *canine idiopathic vestibular disease* is more accurate. The equivalent term in cats is *feline idiopathic vestibular disease*.

How can I help my pet?

As in humans, treatment for a vestibular disorder in dogs and cats depends on the specific diagnosis. It is important to have your pet examined by a veterinarian to rule out conditions such as stroke or hyperthyroidism. The examination may also reveal an underlying and treatable condition affecting the inner ear. For example, if an ear infection is inflaming the tissues and nerves of the vestibular system, an important part of treatment will be to eliminate the infection.

If the problem is diagnosed as the more common condition of canine- or feline idiopathic vestibular disease, a veterinarian may prescribe some medication to reduce your pet's nausea in the short term but will often adopt a "wait and see" approach to treatment. During this period, you can help your pet's recovery in several ways:

- **Give your pet time.** The sudden onset of symptoms is disconcerting to owners, often resulting in an understandable sense of urgency. However, feline- and canine idiopathic vestibular disease are not life threatening. Most pets with good general health will naturally adapt and compensate such that symptoms begin improving within about three days and almost completely resolve in two weeks, although a head tilt may remain.
- **Comfort your pet by managing your own stress.** Pets are very sensitive to the mood of their companions. The less agitated you are about your pet's illness, the calmer he will be.
- **Provide a quiet resting spot.** Make sure that your pet has a place to rest away from the bustling activities of the house-



Figure: Bolivar at the onset of vestibular disease.

In January 2011, Bolivar suddenly couldn't walk straight. His owners reported that he was "not his ridiculous, bouncy puppy-like seven-year-old self." But after four weeks, he'd significantly improved. Happily, his owners now tell us "He is mostly better. He has a few trace symptoms still, perhaps the most significant being that he can't keep track of a thrown ball any more. So we just roll it gently, and he loves playing chase as much as he ever did."

Read the complete story at:

<http://erinandchristopher.us/bolivar/our-crooked-dog/>

hold. For example, minimize your pet's exposure to enthusiastic toddlers and loud televisions. Encourage your pet to avoid settling in the middle of a traffic pattern. Even though you may be attentive to cautiously stepping around or over him, your pet's heightened motion sensitivity may make him startle easily.

- **Provide lighting and proprioceptive support.** Good lighting is essential so that your pet can use visual cues to confirm or adjust to the signals about head position sent from his vestibular system. Also consider providing a proprioceptive "surround" for your pet to nestle against. To do this, take a long thick blanket, roll it up like a jelly-roll, and then snuggle it around your pet in a C-shape.
- **Avoid carrying your pet.** In the same way that a human with a vestibular disorder needs to move about to help recalibrate sensory information, your pet needs to retrain his system by navigating on his own. The touch sensors in a pet's paws provide useful sensory information about balance when he walks or runs but they won't be activated if his paws are dangling in air. For this reason, avoid carrying your pet. Instead, help him to

walk on his own by placing your hands on both sides of his body. If he starts tilting, he will feel increased pressure of his body against your hand, and these proprioceptive cues will help him know to adjust his balance. An alternative way to assist your pet in walking is to support him with a sling or towel looped under his belly. If carrying your pet is unavoidable, lift him slowly, and hold the pads of his paws while you are moving.

The importance of a healthy vestibular system

The vestibular system is fundamental to the well-being of humans, dogs, and cats. It allows us to recognize where we exist in space and how we are moving. It helps us to make adjustments that preserve and maintain our balance and clear vision—which is why the vestibular system is vital to survival for animals in the wild. In domesticated pets, peripheral vestibular dysfunction often results in severe and disconcerting behavior changes. However, with a proper diagnosis, the safety of your home, and your care, your pet's condition can often resolve.

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This document is not intended as a substitute for professional health care.

News About VEDA

Send us your e-mail address By the end of the year, we aim to offer our newsletter, *On the Level* (OTL) online. The e-OTL would contain the same content as our print newsletter, but it will allow us to deliver it in an easier-to-read format (such as with larger typeface). Paper OTL delivery will still be available to those without Internet access or for those who can't comfortably read information on a computer monitor or print it out, if needed. However, we hope that most

members will elect to receive the e-OTL, helping us get information out to everyone more simply and quickly. If you have an e-mail address and would like to start receiving e-OTLs in the future, send your e-mail address to info@vestibular.org. PLEASE include your name and a short note letting us know that you'd like to receive newsletters by e-mail when they are available.

VEDA wants feedback from members The Vestibular Disorders Association (VEDA) is undertaking important changes aimed at building our advocacy efforts and improving other member services. VEDA members have valuable experience and ideas that can help us

shape how we address this work. Please take a moment to respond to the enclosed survey **OR** take it online at www.vestibular.org.

Your opinion matters to us. Make it count!

VEDA adds more articles to its free online library VEDA offers an online library of publications that is available to the public. We recently added *Observations on Cognitive and Psychological Aspects of Vestibular Disorders* to this free library. The article includes comments

from a social worker, an otolaryngologist, and a neuropsychologist who were interviewed by VEDA on how vestibular disorders affect cognitive and psychological or emotional functioning. Check it out at www.vestibular.org.

VEDA's Board of Directors expands VEDA's Board of Directors is a dynamic group of individuals who are dedicated to helping VEDA advocate for people with vestibular disorders. Board members represent VEDA's community of people who have or had a vestibular disorder, have a close family member or friend with a vestibular disorder, or who are medical professionals with a special interest and training in treating these disorders. On March 12, the Board gathered in Portland, OR to work on planning for VEDA's future and to meet new Board members Alan Butchman (Seattle, WA)

and Nancy Devine (Bend, OR), who joined midterm members Deanne Bonnar, PhD (Acton, MA), Al Bowman, DPT (Hayward, WI), Gaye Cronin, OTD, OTR (Atlanta, GA), Claire Haddad, CFA (Cohasset, MA), and Sue Hickey (Portland, OR). Earlier this year, the Board bid good-bye to Steve Johnson (Lakewood, CO), who for most of his 2006–2011 term served as Secretary and helped us strengthen our support network. We very much appreciate his dedicated efforts and wish him well.

Balance Awareness Week 2011 Balance Awareness Week 2011 is September 18–24, and we are developing posters and an online event calendar to help clinics spread awareness; please let us know if you have

any activities planned for the week that we can help promote. Further information will be announced in the next newsletter issue.

VEDA Member Survey (This survey takes about 5 minutes.)

The Vestibular Disorders Association (VEDA) is making important changes to build our advocacy efforts and improve other member services. We'd like members to help us shape these efforts by taking the survey below **OR** online at www.vestibular.org.

Section 1. FOR ALL MEMBERS

In what ways do you think VEDA should devote its resources to advocating for people with vestibular disorders? Please assign a number from 1 to 7 to each item below. Use each number only once. 1=Highest priority. 7=Lowest priority.

- | | |
|--|---|
| _____ Support solid, evidence-based research about vestibular disorders. | _____ Help improve the understanding about the emotional and cognitive impacts of a vestibular disorder on the individual and society. |
| _____ Help shorten the time it takes to diagnose a vestibular disorder. | _____ Elevate awareness of the connection between vestibular disorders, disability, and the economic impacts on the individual and society. |
| _____ Address diagnosis and treatment insurance reimbursement issues. | _____ Other: _____
(Please fill in your idea.) |
| _____ Help improve the understanding about vestibular disorders and aging. | |

Section 2. IF YOU HAVE SYMPTOMS OF A VESTIBULAR DISORDER

- | | |
|--|--|
| <p>1. I have consulted a doctor for symptoms of a vestibular disorder.</p> <p><input type="checkbox"/> True
<input type="checkbox"/> False
<u>If "False," skip to Section 3.</u></p> <p>2. Did the first doctor you consulted indicate that your symptoms might be related to a problem with your inner ear?</p> <p><input type="checkbox"/> No
<input type="checkbox"/> Yes
<input type="checkbox"/> I can't recall.</p> <p>3. Did the first doctor you consulted refer you to a specialist?</p> <p><input type="checkbox"/> No
<input type="checkbox"/> Yes What kind? _____</p> <p>4. How many doctors have you consulted for vestibular disorder symptoms? _____</p> | <p>5. How long after you first consulted a doctor about your symptoms was a vestibular disorder diagnosed? (Please choose the closest time frame.)</p> <p><input type="checkbox"/> 1 day
<input type="checkbox"/> 1 week
<input type="checkbox"/> 2 weeks
<input type="checkbox"/> 1 month
<input type="checkbox"/> 3 months
<input type="checkbox"/> 6 months
<input type="checkbox"/> 1 year
<input type="checkbox"/> 2-3 years
<input type="checkbox"/> 5 years
<input type="checkbox"/> More than 5 years
<input type="checkbox"/> Never</p> <p>6. Do you think that the length of time it took to get a diagnosis reduced your ability to eventually feel better?</p> <p><input type="checkbox"/> No
<input type="checkbox"/> Yes
<input type="checkbox"/> I don't know</p> |
|--|--|

7. Select the statement that is most accurate about the vestibular disorder diagnosis you received:

- I was given a specific diagnosis (Examples: Ménière's disease, BPPV, labyrinthitis, perilymph fistula, mal de débarquement, vestibular migraine, acoustic neuroma, ototoxicity, etc.)
- I was given a general diagnosis (Examples: vestibulopathy, vestibular loss or weakness)
- I was never given a diagnosis related to my vestibular system.

8. Do the symptoms of your vestibular disorder affect your relationships with family or friends?

- No
- Yes
- I don't know

9. Do the symptoms of your vestibular disorder affect your ability to work?

- No
- Yes

10. Do the symptoms of your vestibular disorder affect your ability to take care of your household?

- No
- Yes

11. What is the most effective thing you've said or done to get other people to understand what it is like to struggle with symptoms of a vestibular disorder?

12. When you're having difficulty managing your vestibular disorder symptoms, what is the most frustrating thing that people assume about you that is not true? _____

Section 3. IF YOU ARE A FRIEND OR FAMILY MEMBER

1. I am a friend or family member of someone who has/had a vestibular disorder.

- True
- False

If "False," skip to Section 4.

2. Since your friend/family member began having symptoms of a vestibular disorder, in what ways have you increased how you support him/her?

- Run more errands
- Provide more transportation
- Accompany him/her to doctors' appointments more often
- Avoid favorite activities that are problematic for him/her
- Help more with child care and/or household chores
- Provide more financial support
- Other: _____

3. What is the most difficult change that has occurred for you as a result of your friend/family member having a vestibular disorder? _____

4. To what degree has the vestibular disorder of your friend/family member affected your life?

- Not at all
- A little
- Moderately
- Significantly

5. To what degree do you think the vestibular disorder has affected the life of your friend/family member?

- Not at all
- A little
- Moderately
- Significantly

6. How often do you have trouble believing that your friend/family member is having as much difficulty as he/she claims, demonstrates, or accommodates?
- Never
 - Sometimes
 - Often
 - Frequently

7. What help would you like from VEDA?
- Provide support groups for friends/family members.
 - Provide a private online comment board for friends/family members.
 - Provide educational information about vestibular disorders.
 - Help me explain that my needs are important, too.
 - Other _____

Section 4. IF YOU ARE A HEALTH SPECIALIST

1. I am a medical or health specialist who diagnoses and/or treats vestibular disorders.
- True
 - False
- If "False," skip to Section 5.
2. Please select the 5 top strategies below for their effectiveness in facilitating earlier diagnosis. (**Select only 5.**)
- Increase exposure to the subject in medical school.
 - Improve education about dizziness for primary care providers.
 - Promote development of a standardized plan/systematic protocols for diagnosing dizziness.
 - Improve access to high-quality continuing education coursework.
 - Develop formal certification and recertification requirements for competency in diagnosing and treating vestibular disorders.
 - Promote creation of physician specialty groups dedicated to vestibular disorders.
 - Emphasize the importance of trained diagnosticians above diagnostic equipment.
 - Improve consistency and appropriateness of diagnostic testing coding guidelines for vestibular function testing.
 - Improve diagnostic tools.
 - Increase research.

3. If VEDA were to support solid, evidence-based vestibular research, which strategy would be most effective for VEDA to address first? (**Select only one.**)
- Connect researchers with research subjects
 - Fund research
 - Urge agencies (e.g., National Institutes of Health) to increase research funding for the subject.
4. What do you think is the worst consequence on your patients of a delayed diagnosis? _____
5. Please indicate Professional Membership services below that you would find valuable if VEDA were to offer them.
- On the provider directory, provide space for me to list my specialty training certifications.
 - On the provider directory, provide a link for patients to get directions for finding my clinic.
 - Provide downloadable patient education materials that are co-branded with my clinic.
 - Expand the calendar of conferences and training opportunities.
 - Provide a private forum where we can comment on diagnosis and treatment, research, and the business of managing a clinic.
 - Provide clinic marketing tools.

Section 5. FOR ALL MEMBERS

1. What topics would you like to see covered more in VEDA's newsletter and Web site?
- Diagnosis and treatment
 - Cognitive impacts
 - Psychological issues
 - Insurance coverage
 - Work and disability issues
 - Recent research
 - Opportunities for researchers to connect with research subjects
 - Opportunities to attend support groups
 - How to start and lead a support group
 - Tools for improving doctor-patient communications
 - Recognition of the challenges of living with a vestibular disorder
 - Member-submitted tips for coping with a vestibular disorder

2. Would you attend support group meetings if they were available?
- No
 - Yes
 - Yes, but only online groups
 - Yes, but only groups that meet face-to-face

3. Would you be interested in posting comments on VEDA's Web site?
- No
 - Yes
4. Please check all that apply about why you support VEDA with dues/donations:
- I only pay dues because of the member services I receive.
 - VEDA's information helps me understand my medical condition.
 - VEDA appreciates what it is like to have a vestibular disorder.
 - VEDA provides research updates.
 - I strengthen VEDA's ability to help people with vestibular disorders.
 - VEDA increases public awareness about vestibular disorders.
 - I want the opportunity to join a group that collectively effects a change.
 - Other: _____

5. Would you like to start receiving our newsletter via e-mail when this feature becomes available in the future?
- No
 - Yes
 - Maybe later

Section 6. SUBMISSION INFORMATION

Please extract the survey pages from the center fold of this newsletter and mail them to the address below, using a basic letter postage stamp (44¢ in the US).

Mail to: VEDA ▪ PO Box 13305 ▪ Portland, OR 97213 ▪ USA

If you would like to submit your name and e-mail address for us to use in the future for e-mailed newsletters, you may provide us with your name and e-mail address below.

Name

E-mail address
(VEDA will only use your address for VEDA business.)

Thank you for providing VEDA with your valuable insights.

News Briefs

Reports from
the 2011 ARO
MidWinter
Meeting

The Association for Research in Otolaryngology has released the abstracts of its 2011 Annual MidWinter Meeting for free download. Among the many topics of interest are: age-related vestibular dysfunction; the relationship between vestibular stimulation and blood pressure, heart rate, and vasovagal responses; abnormal vestibulo-ocular reflex in autism; interference between cognitive

tasks and postural control; the effect of tricyclic antidepressants on vestibular ganglion cells; compensation after canal plugging; the impact of noise on balance; vestibular deficits and elevated anxiety; and vestibular trauma from exposure to noise, blasts, and wind turbines. Download the complete file at www.aro.org/mwm/documents/2011_Abstract_Book.pdf.

External noise
impacts balance
and stability

Researchers at the Naval Medical Center in San Diego and the University of Pittsburgh studied whether external noise affects balance and stability. They recorded the sway of healthy adolescents with no history of ear disease or balance disorders while the teens stood on a force plate with eyes closed and with side-to-side head rotation under four conditions: (a) with general room noise, (b) with music coming through head-high speakers five feet in front of them, (c) with no noise—while wearing ear plugs, and

(d) with head-fixed noise—while listening to the same music through head phones. The results showed that balance function was significantly better (sway decreased) with music played from a speaker in a fixed location than balance function with general room noise. In addition, eliminating external noise with headphones worsened balance.

—Hoffer M, Hoffer A, Balaban C. The impact of external noise perception on sway in normal individuals. In: Abstracts of the 34th Annual MidWinter Meeting of the ARO; Feb. 19–23, 2011; Baltimore MD.

Earthquake
“Hangover”

The destructive March 11, 2011 earthquake in Japan and its multiple aftershocks led to a medical condition called *jishin-yoi*, which translates to “earthquake drunk” in English. The frequency and force of the shaking has left some citizens with the perception that the ground is still moving, even when it no longer is. Dr. Munetaka Ushio at the University of Tokyo Hospital, Department of Otolaryngology reported “An estimated 30% of the

population in quake-stricken areas have experienced this.” Many of these people have balance impairment with motion sickness. Others have a form of earthquake phobia, post-traumatic stress, or some combination of all of these conditions. Clinics have seen a large increase in the number of patients seeking relief. Treatments prescribed depend on the type of condition involved.

—<http://blogs.wsj.com/japanrealtime/2011/04/14/>

Disclosure: An Employer's Perspective

The issue of whether to disclose a disability during the employment search process touches a nerve that runs deep and gets personal. For many job seekers, the fear is unshakeable that a perceived disability will undermine their efforts and somehow label them unfit for work. Oz Mondejar, Vice President of Human Resources and Community Relations for Partners Continuing Care at Spaulding Rehabilitation Hospital in Boston, MA, cautions about making such assumptions, whether by the employer or the job seeker. "That sometimes sets the tone for a break in communication."

If a visible disability is readily apparent when the job applicant comes in for an interview, Oz says "if you don't address it somewhere along the line, it's the elephant in the middle of the room and you can't get beyond it. So you have to be confident enough to talk about it in a way that it's part of the interview, but not the only part." He notes that an interviewer may be concerned with issues of legality

and appropriateness and may not ask directly, but will want to hear and be assured that, regardless of a person's disability, he or she has a clear strategy for getting the work done.

In the case of a hidden disability, at whatever stage a person decides to disclose, it is important for him/her to emphasize that there is an established mechanism, tool, or strategy for completing the requirements of the job, even if the process of getting it done looks different from how others might accomplish it. An important question to address is how and when the disability will manifest itself or need an accommodation. "It wouldn't necessarily be part of that first interview," Oz explains. "If you get called back for a second interview, that's the time to say, 'In my experience handling this type of work, what's very helpful for me is [describe what you need].'" From the employer's perspective, closely linked to the disclosure should be the confident emphasis on the experience and ability to get the job done. —*Disability Issues*, 2010;30(3)

Insurance Plan for Pre-Existing Conditions

The Pre-Existing Condition Insurance Plan (PCIP) makes health insurance available to people who've had a problem getting insurance due to a pre-existing condition. The PCIP was launched in July 2010 with \$5 billion in funding from the Affordable Care Act with the goal of providing an insurance option to people who

may be barred from coverage or who have to pay huge surcharges because of a pre-existing condition. The PCIP is available until 2014, when new insurance exchanges go into effect and insurers are prohibited from denying coverage to adults with pre-existing conditions. Further information is available at: <https://www.pcip.gov/>.

Tips for Dining Out

Crowded, busy social settings such as restaurants may be very difficult to navigate if you have a chronic vestibular disorder. By making some adaptations, you may still be able to meet friends and eat in relative comfort. VEDA members have submitted the following hints that they have found helpful when they dine out.

Selecting a restaurant

- Pick a restaurant with small, separate rooms.
- Avoid dining during rush hours.
- Avoid places that play loud music.
- Seek carpeted floors that reduce conversational noise and vibrations caused by waiters moving nearby.
- Avoid places with visually distracting floors such as those that are highly polished or that have checkered tiles or a flamboyant carpet.
- Avoid places with busy wallpaper.
- Don't even think about going to a revolving restaurant such as the one in the Seattle Space Needle!

Lighting

- Sit away from and with your back to fluorescent lighting.
- Be aware that many restaurants control lights with a central rheostat, which can be visually disorienting when activated.
- Ask that a flickering candle be removed, or have its wick trimmed.

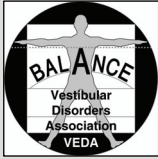
Choosing seating

- Seat yourself in the corner of the room, avoiding the bustling middle.
- Sit away from kitchens, bars, and cash registers.
- If the restaurant has a ceiling fan, sit with your back to it.
- Sit in chairs rather than benches to reduce motion caused by others seated next to you.
- Use chairs with arm rests to take advantage of the additional stabilizing proprioceptive cues.
- Opt for a booth rather than a table because the walls of a booth help block noise and motion.
- Reduce the amount of head turning required to converse with your dining partners by choosing a round table or by sitting at the head or foot.

Ordering from the menu

- If the restaurant has a Web site, download a menu in advance and plan the meal before you go to the restaurant. This will help you to avoid visual strain and confusion.





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