



VESTIBULAR

DISORDERS ASSOCIATION

An Introduction to Balance Disorders

Prepared by:
Jordan Tucker, PT, DPT and
Cynthia Ryan, MBA

Disclaimer: This presentation is not meant as a substitute for medical care.

What You Will Learn

- Balance and the vestibular system
- What is a vestibular disorder?
- Causes of vestibular disorders
- Symptoms of vestibular disorders
- How are vestibular disorders diagnosed?
- Treatment for vestibular disorders
- Where to get help



What does “vestibular” mean?

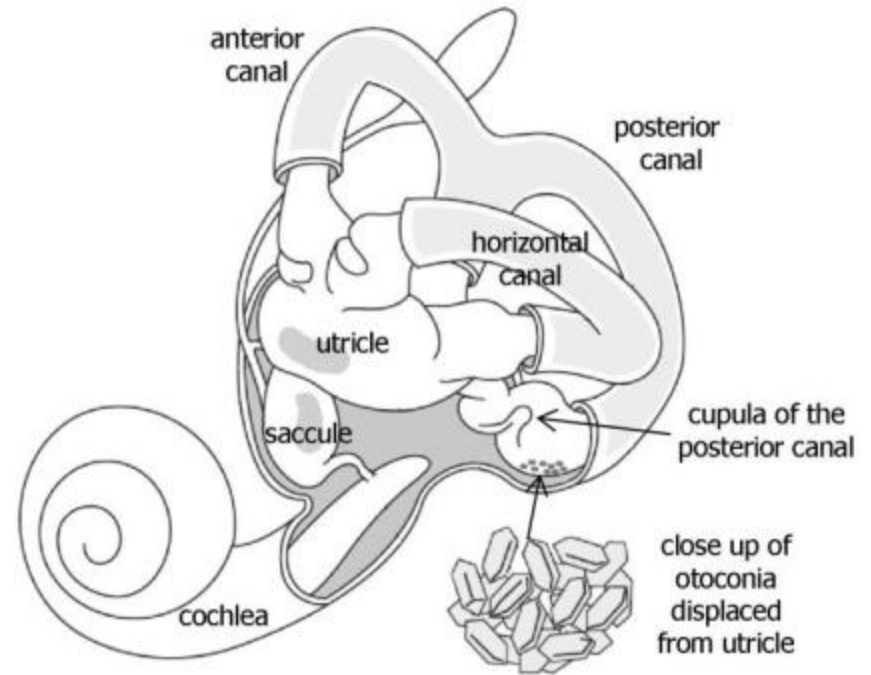
The **vestibular system** includes the parts of the inner ear and brain that process the sensory information involved with controlling balance and eye movements.



Maintaining balance depends on information received by the brain from the eyes, muscles and joints, and vestibular (inner ear) organs.

The Inner Ear

Sensory information about motion, equilibrium, and spatial orientation is provided by the inner ear, which includes the utricle, saccule, and three semicircular canals.

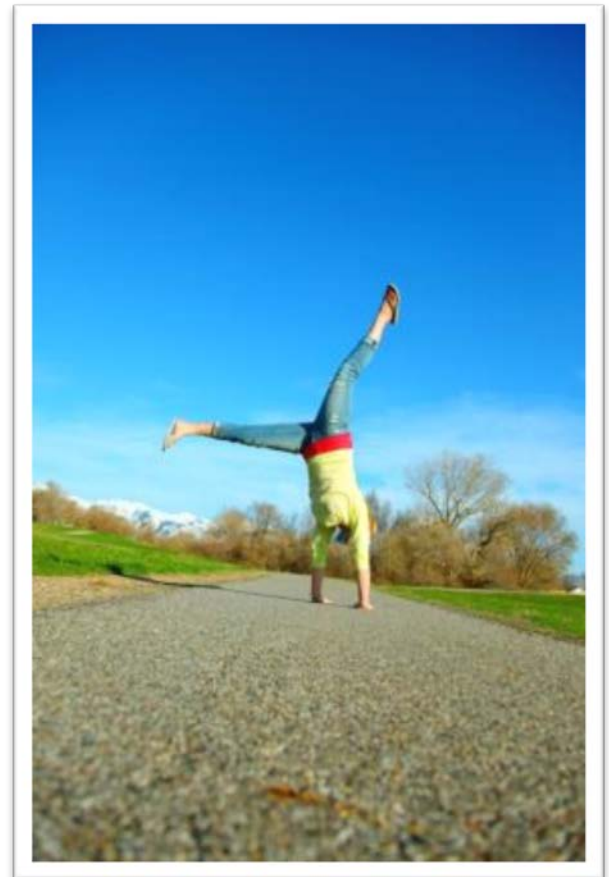


The utricle and saccule detect gravity (vertical orientation) and linear movement. The semicircular canals detect rotational movement and are filled with a fluid called endolymph.

A Little Bit About Balance

The human balance system is responsible for:

- Seeing clearly while moving
- Knowing which way is up
- Knowing what direction and how fast you are moving
- Making posture adjustments to catch you if you are losing your balance or walking on uneven surfaces.



What causes vestibular disorders?

- Viral infections
- Head trauma
- Drugs or chemicals that are toxic to the inner ear or brain
- Degeneration with aging
- Genetic conditions
- Tumors
- Exposure to loud noises
- Unknown reasons

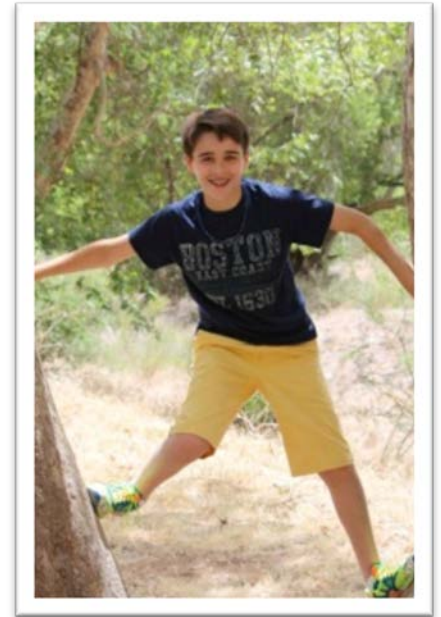


Who is affected by vestibular disorders?



The prevalence of vertigo as a function of age lies around 17% and rises up to 39% in those over 80 years of age [[Davis and Moorjani, 2003](#)].

Vestibular disorders also affect children, which can result in learning deficits if left undiagnosed.



Symptoms of Vestibular Disorders

Vertigo/Dizziness



Vertigo:

- Spinning
- Whirling
- Illusion of movement

Dizziness:

- Lightheadedness
- Floating
- Rocking
- Feeling of being pulled in one direction

Symptoms of Vestibular Disorders

Imbalance and Spatial Disorientation



- Difficulty walking & turning
- Decreased coordination
- Looking at the ground
- Tilted head
- Holding onto furniture while walking
- Sensitivity to changing walking surfaces
- Difficulty finding balance in large open spaces

Symptoms of Vestibular Disorders

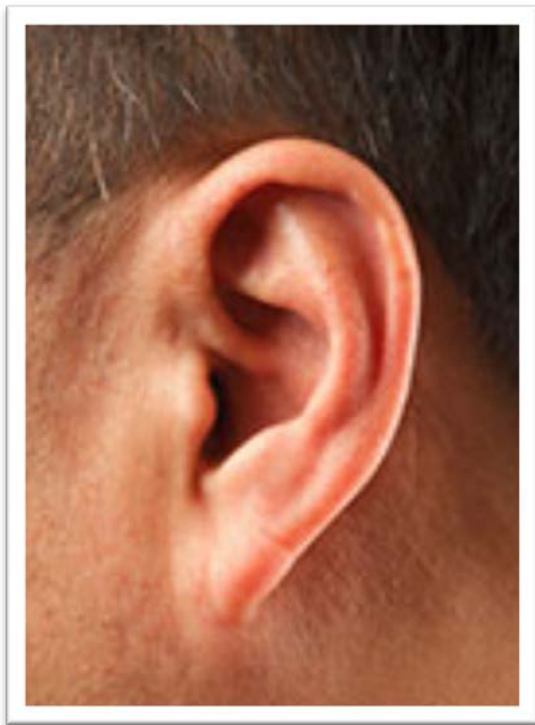
Vision Changes



- Trouble focusing or tracking objects
- Objects/words bounce or move or appear doubled
- Sensitivity to light/glare/technology
- Discomfort from busy environments (traffic, crowds, stores, patterns, movies/TV)
- Looking at closer objects instead of far away objects

Symptoms of Vestibular Disorders

Hearing Changes



- Hearing loss
- Tinnitus
(ringing/roaring/buzzing)
- Noise sensitivity
- Loud noises increase
dizziness, vertigo,
imbalance

Symptoms of Vestibular Disorders

Cognitive Problems



- Difficulty concentrating or paying attention
- Short term memory difficulties
- Difficulty focusing on conversation especially in loud places
- Greater than normal mental or physical fatigue

Symptoms of Vestibular Disorders

Psychological Issues



- Loss of self-reliance
- Loss of self-confidence and/or self-esteem
- Anxiety/panic
- Social isolation
- Depression
- Vestibular disorders are invisible to others

Symptoms of Vestibular Disorders

Other Symptoms



- Nausea, vomiting
- “Hangover” type feeling
- Motion sickness
- Headaches
- Slurred speech
- Sensitivity to pressure or temperature changes and wind currents
- Pain, pressure or other symptoms with diet changes

How to get diagnosed

Vestibular disorders are very difficult to diagnose. It is important to see a healthcare professional with vestibular training to help you find the cause of your symptoms.



Diagnostic Tests

Types of tests your doctor may order to help diagnose a vestibular disorder:

Balance



Vision



Hearing



See VEDA's website for a specific list of diagnostic tests.

Types of Vestibular Specialists

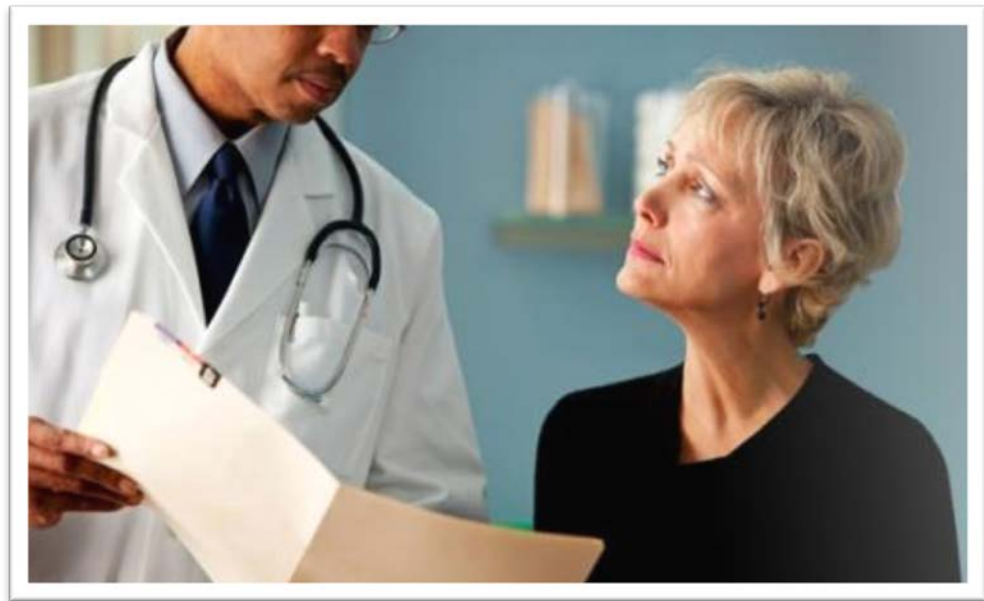
- ENT (otolaryngologist)
- Otologist/neurotologist
- Neurologist
- Otoneurologist
- Audiologist
- Physical & Occupational Therapists

Healthcare providers within each of these specialty areas must be specially trained to work with vestibular patients.

**Visit VEDA's online provider directory to find a vestibular specialist near you:
vestibular.org**

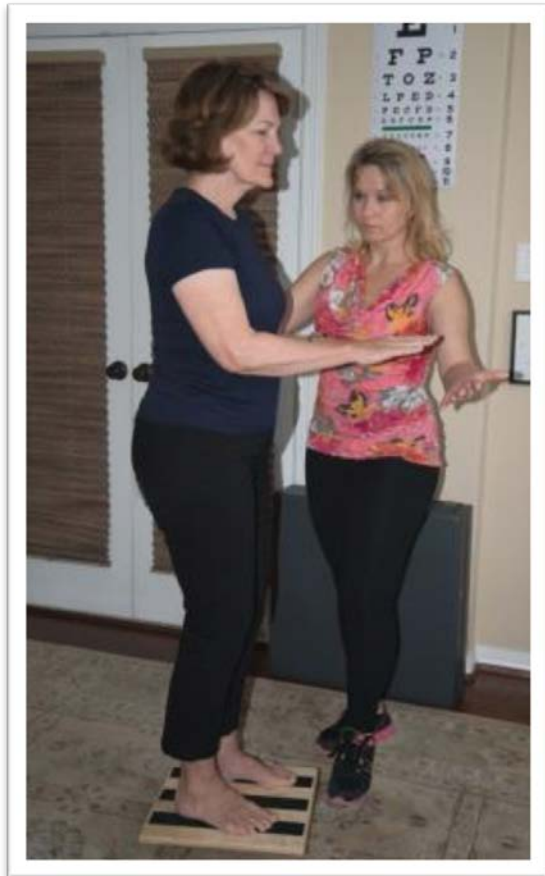
Treatments of Vestibular Disorders

The treatment path you and your medical team decide upon will vary greatly from person to person and depends on the type and severity of your diagnosis and symptoms, life factors such as work and family, and how you decide to manage your disorder.



Treatments of Vestibular Disorders

Vestibular Rehabilitation Therapy (“VRT”)



VRT is like physical therapy for vestibular disorders. Therapists are specially trained to provide specific exercises that retrain the brain to recognize and process signals from the vestibular system. VRT is most effective when practiced regularly.

Treatments of Vestibular Disorders

Positioning Maneuvers

The canalith repositioning maneuver – also referred to as the Epley maneuver - is used to treat benign paroxysmal positional vertigo (BPPV), which is caused when the crystals in the inner ear are dislodged. This procedure helps put those crystals back in place.

This treatment corrects BPPV in 90% of cases.



Treatment of Vestibular Disorders

Home-Based Exercise

Exercises may be assigned by a vestibular therapist to help you continue your vestibular rehabilitation therapy at home. These will be individually assigned based on your symptoms and goals.



Treatment of Vestibular Disorders

Dietary Adjustments

Diet can be helpful in managing several vestibular disorders such as Meniere's, secondary endolymphatic hydrops and migraine-associated dizziness.



Treatment of Vestibular Disorders

Talk Therapy/Counseling

Vestibular disorders are invisible and unpredictable, often causing anxiety and depression. Counseling can help you learn to cope.



Treatment of Vestibular Disorders

Medication

Medication may be used to treat the cause, control the symptoms, accelerate compensation, or diminish the psychological impact of a vestibular disorder.

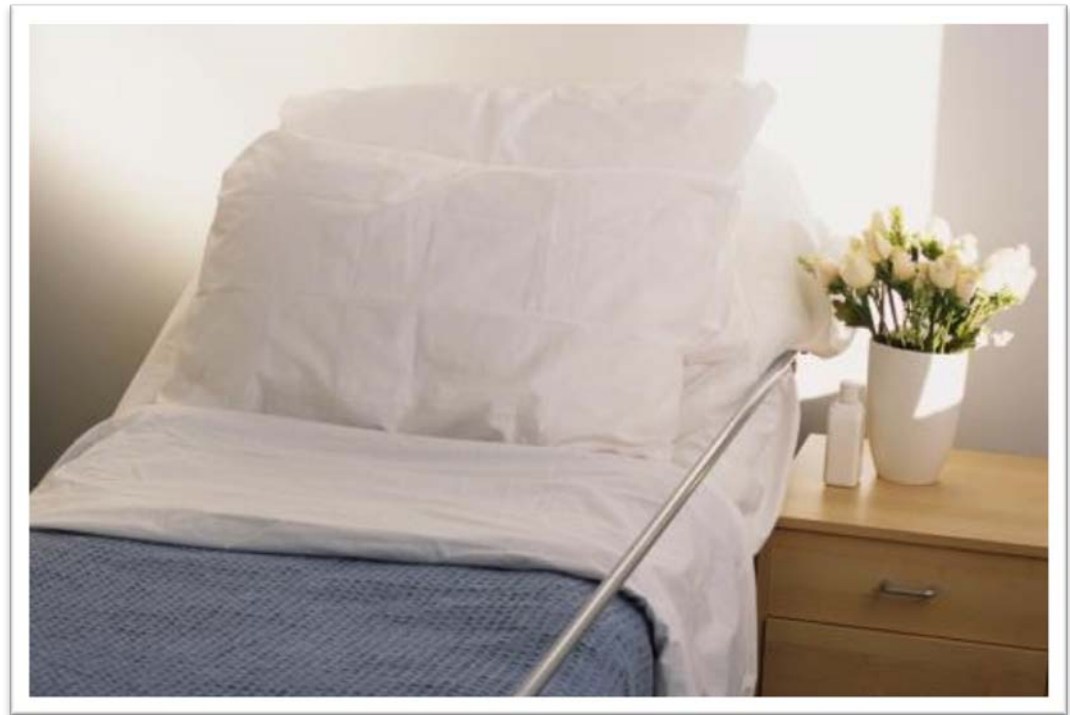


Examples of medications include anti-nausea drugs and anti-anxiety medications.

Treatment of Vestibular Disorders

Surgery

For some vestibular disorders, surgery on the affected area of the inner ear may be considered to help relieve the symptoms or cause of the disorder.



Treatment of Vestibular Disorders

Alternative Therapies

- Tai Chi
- Acupuncture
- Chiropractic
- Yoga
- Meditation
- Reiki
- Virtual reality gaming platforms

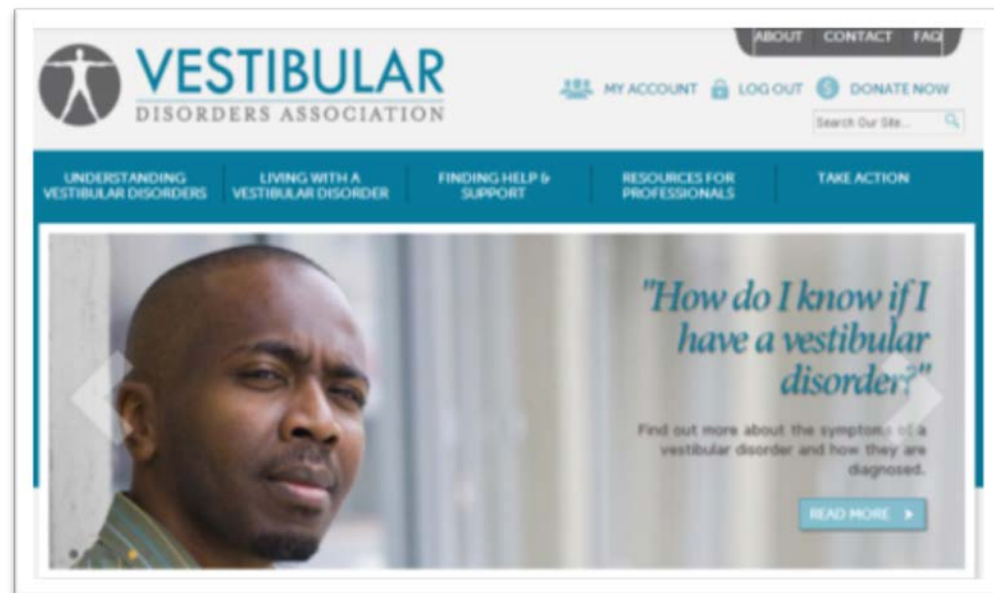


I think I have a vestibular disorder.

What do I do?

There are many resources on VEDA's website that can help you:

1. Visit our 'Symptoms' page
2. Download a 'Medical History Form'
3. Use our online provider directory to search for a vestibular specialist near you.



Where to Get Help



VESTIBULAR
DISORDERS ASSOCIATION

VEDA serves people with vestibular disorders by providing information and support to help them understand and cope with their condition, and by connecting them to vestibular specialists. See VEDA's website for:

- Educational Resources
- Professional Provider Directory
- Support Group Network Directory

<http://vestibular.org>

800-837-8428 info@vestibular.org

Also look for VEDA on Facebook, Twitter and Pinterest