

**SOUND information**  
for your hearing health

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## Don't Let Vertigo Spin Your Patients' Worlds Out of Control

Spinning, tilting, nausea, headaches, and hearing loss are common complaints physicians are likely to hear from just under half of their patients — and all are common perception-related symptoms of vertigo. According to the National Institutes of Health, approximately 40 percent of the United States population reports experiencing vertigo at least once in their lifetime. The prevalence increases in females and with age, but it can occur in people of all ages, including children. While vertigo itself is benign, its symptoms and underlying causes pose a threat to the well-being of those affected. In mild cases, it can lead to fatigue, struggle with work, and depression. In severe cases, it can result in difficulties walking and standing, and it can lead to sudden falls and injury — which means identifying and treating the cause early is important.



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Most often vertigo occurs as a result of a disturbance in equilibrium due to a disorder in the vestibular system, an area in the inner ear responsible for keeping objects in focus as the body moves. **Peripheral vestibular disorders that may cause vertigo include benign paroxysmal positional vertigo (BPPV), Ménière's disease, vestibular neuritis, and ototoxicity.** Each of these disorders has their own unique causes, effects, and treatments.

**BPPV is at the root of approximately 50 percent of the complaints of vertigo in older people.** It occurs when tiny particles called otoconia or canaliths, composed of calcium and protein, fall into the inner-ear canals. Head movements cause the canaliths to shift the inner ear's nerve hairs, which in turn sends signals to the brain initiating the sensation of vertigo. BPPV is characterized by bouts of vertigo, which can be accompanied by facial-muscle weakness, reduced cognitive function, and hearing loss. Common causes of BPPV include head injury, infection, and inner-ear degeneration due to aging.

The canalith repositioning procedure (CRP) is the primary treatment for BPPV and can be performed in a trained professional's office or can be self-administered by the patient. CRP consists of a series of movements that reposition the head and trunk. The treatment's goal is to move the canaliths out of the inner-ear canal and back into an area where they will no longer elicit the symptoms of BPPV and can be reabsorbed by the body. The procedure is effective in 80 percent of patients, but it does not prevent reoccurrence.

**Ménière's disease is an inner-ear disorder believed to result from a buildup of fluid and changing pressure.** It typically only affects one ear and is characterized by sudden attacks of vertigo that may occur after a brief period of muffled hearing or tinnitus. A feeling of fullness in the ear and hearing loss may also occur. Ménière's disease is considered a chronic condition primarily affecting individuals between the ages of 40 and 60 years; however, it can occur in people of all ages. According to the National Institute on Deafness and Other Communication Disorders (NIDCD), approximately 615,000 individuals in the United States currently suffer from Ménière's disease.

Constricted blood vessels, viral infections, allergies, autoimmune reactions, and genetic predispositions are all thought to be possible reasons for the onset of Ménière's disease. While there is no cure, treatments include the use of medications to alleviate vertigo, salt restriction and diuretics to reduce fluid retention, and dietary and lifestyle changes, including limiting caffeine, chocolate, alcohol, and smoking. Cognitive therapy and surgery are treatment options that may be utilized for more serious cases.

**Vestibular neuritis is an inner-ear disorder typically related to an infection that causes inflammation in the ear around the nerves crucial to the body's sense of balance.** Once inflamed, the transmission of sensory information from the ear to the brain is disrupted, and vertigo as well as vision and hearing disturbances occur. The onset of symptoms is most often sudden and can occur at any time.

The most common approach to the treatment of vestibular neuritis includes relieving the nausea and dizziness with medication while healing the infection with antibiotics, steroids, or antiviral drugs. If symptoms become chronic and persist for several months, vestibular rehabilitation exercises will be used to help the brain adapt to the vestibular imbalances.

**Ototoxicity is a poisoning of the ear due to exposure to certain medications and environmental chemicals — such as mercury, tin, and lead — that damage the vestibulocochlear nerve.** High doses or the long-term use of some antibiotics can cause permanent ototoxicity. Other medications that can cause temporary ototoxicity include anticonvulsants, antidepressants, loop diuretics, pain relievers, and prescription and over-the-counter cold medicines. Symptoms of ototoxicity include vertigo, blurred or bouncing vision, headaches, fatigue, and nausea. The vast majority of ototoxicity cases are short term, and the effects are reversible.

There is currently no standard treatment for ototoxicity. When permanent damage from a bout of ototoxicity does occur, treatments will include reducing the effects through physical therapy focused on restoring balance, and the use of hearing aids in cases where hearing loss has occurred.

Most forms of vertigo are treatable when accurately diagnosed by a hearing healthcare specialist. Methods of relief are available in many forms that can help alleviate the spinning, tilting, nausea, and headaches that plague otherwise healthy individuals, and can help them lead a normal life. ■