

Dizziness and Balance Disturbances



A Common Issue

More than 40% of Americans experience dizziness that is severe enough for a doctor's visit. The term "dizziness" is used to describe many different sensations, including vertigo, lightheadedness and motion sickness. It is important to understand that these are symptoms and not a disease. The symptoms may occur when the brain receives conflicting information from various parts of the balance system, which include nerve impulses of the inner ear, eyes, and nervous system. Any one of these nerve impulses may cause feelings of faintness, weakness, unsteadiness, hyperventilation, visual problems, or room-spinning vertigo. Although it may be incapacitating, dizziness rarely signals a serious condition and treatment will depend on your symptoms and the cause.

Why It Happens

The underlying causes of dizziness symptoms may include allergies, metabolic disturbances, shock or head trauma. Often, the cause is a disturbance of the balance mechanism in your inner ear, which detects motion, gravity and changes in the body's position. There may be a change in inner ear fluid, a viral infection involving the inner ear nerve system, or interference with the circulation of blood to the inner ear.

Less common causes of dizziness may include autoimmune inner ear disease (AIED), Ménière's disease, cochlear hydrops, acoustic tumors or the toxic effects of some medications. Although dizziness can occur at any age, older age can increase the risk of developing certain conditions that lead to balance problems.

Treatments

If you are having balance problems, it is important to see your physician, who will perform a physical exam that focuses on your heart, head, ears and nervous system. Your physician may refer you to a specialist to help determine if the underlying cause involves the inner ear. In most cases medical treatment (prescribed medicines) is helpful in eliminating the symptoms of vertigo, dizziness and motion sickness.

Some medicines used to treat balance disorders include diuretics and vasodilators (blood vessel dilators like niacin), antihistamines, steroidal and anti-inflammatory medicines, and sedatives. Physicians may also recommend allergy treatment and diet regulation to reduce episodes of vertigo. In rare cases, surgery may be necessary.

Current Research and Future Outlook

Research has shown that inner ear fluid pressure changes may cause balance disturbances. Scientists have shown that the endolymphatic sac (a component of our inner ear) is capable of secreting as well as absorbing fluids. By using an immuno-histochemical marker with a technique they developed called "antigen retrieval for immuno-histochemical evaluation," Institute scientists are investigating the structures responsible for the absorption and production of fluid in vertigo cases associated with inner ear disorders such as Ménière's disease and cochlear hydrops. A proposed 3-dimensional reconstruction of these secretory and absorptive structures will provide researchers with a better understanding of cell function or dysfunction, and possible avenues for future therapies.

Resources: House Ear Institute, National Institutes of Health (NIH) and National Institute on Deafness and Other Communications Disorders (NIDCD), Mayo Clinic and WebMD.com. The information provided herein should not be used for diagnosis or treatment of any medical condition and is not intended to replace the advice of a physician.