



700 W. Kent Ave • Missoula, MT 59801
(406) 541-EARS (3277) or 1-800-255-8698
www.rockymountaincenter.com

Daniel E. Braby, M.D. - Phillip A. Gardner, MD - Jeffrey R. Haller, M.D. - Peter G. Von Doersten, M.D. - Josh Moser PA-C

MÉNIÈRE'S DISEASE

The evaluation of dizziness begins with an attempt to localize the problem to a particular segment of the human nervous system, specifically, whether a problem is "central" or "peripheral". "Central" problems are associated with the central nervous system and the brain and spinal cord in particular. Brain problems can be anything from cerebral palsy, seen frequently in premature infants, to problems related to migraine headaches (vestibular migraines) and brain tumors. "Peripheral" problems refer to problems with the sensory systems, which input information to the brain, namely the eyes, the sensory receptors in the joints, and the inner ears. It is easy to see how important all of these sensory systems are by noting how balance is worse in a completely dark room, or an unstable section of ground (or a moving platform), or when just getting off a merry-go-round (which confuses the inner ear balance input temporarily).

The proper evaluation of dizziness requires that attention be paid to all of the systems noted above by obtaining a careful history of the patient's problem. Then through a physical examination, further evaluation is done of the various parts of the "peripheral" system, as well as examination tests, which might reveal a problem with the "central" system. The brain can be thought of as a great computer, which receives information from the surrounding body, process it, and then tells the body what to do about it by making adjustments in stance and muscle tone. If all parts of the "peripheral" system seem to be intact, greater attention is paid to the "central" system -- the computer.

The topic to be addressed today is Ménière's Disease, which can be thought of as a problem with a specific part of the peripheral system known as the labyrinth of the inner ear. The triad of symptoms, episodic vertigo, a sensation of fullness in the ear, and fluctuating hearing loss, was first described by Prosper Ménière in 1862. It is a disease, which can also have associated ringing in the ear, also known as head noise or tinnitus, as well as vertigo, which is so severe as to cause nausea and vomiting.

The natural course of Ménière's disease is one of an initial good level of hearing and periods of vertigo (a sensation of movement such as spinning) which may last for minutes to hours. These periods may be accompanied by a decrease in hearing as well as tinnitus. Over a period of years, the hearing loss may become more severe and not fully recover after each episode. If not treated appropriately, a patient may eventually have a severe hearing loss in the affected ear with a drop in hearing to the 50-60 decibel level or worse. The balance problems and dizziness can sometimes "burn themselves out". Usually the tinnitus persists.

The cause of Ménière's disease has been found to be related to the production and reabsorption of fluid within the middle ear. (This is not to be confused with fluid in the middle ear, which is seen commonly in children and known as otitis media. Middle ear fluid is the type frequently diagnosed by a pediatrician looking in the ear, treated with antibiotics, and labeled an ear infection.) Simply put, there is too much fluid within the inner ear, specifically, the scala media of the ear. This is thought to be due to either an overproduction of this inner ear fluid called the endolymphatic sac. The reason for the inner ear fluid problem is poorly understood, but could be related to the immune function of the inner ear, anatomical variants, head trauma, altered blood supply to the area, or body fluid shifts.

The diagnosis of Ménière's disease begins first with the careful history described earlier and recognition of the classic symptoms. A physical exam is performed next to rule out other problems with the ears, head, and neck. A hearing test is then obtained, which may show a hearing loss in the affected ear. Frequently, other "balance tests" are then obtained such as an ENG (electronystagmogram), which can reveal a decrease of information, which the inner ear balance nerves are transmitting to the brain. Sometimes, it is also necessary to obtain a special imaging study known as a MRI to rule out the presence of a tumor on the balance nerve or hearing nerve, as well as within the brain.

After the diagnosis is made, attention shifts to treatment. This typically consists of measures to reduce the amount of inner ear fluid. The mainstay of this therapy is the initiation of a low salt diet and diuretic medications. Diuretics remove fluid from the body and can remove electrolytes, which need to be monitored regularly. Some diuretics such as Dyazide do not waste the essential electrolyte potassium. In the pediatric population, these diuretics are usually taken every other day. Regular follow-up to monitor symptoms and hearing levels is important. If treatment with medications is not effective in controlling the disease, surgical procedures are sometimes necessary.

700 West Kent Ave • Missoula, MT 59801 • 406-541-EARS (3277) or 800-255-8698