

Ménière's Disease

Fact Sheet

What is Ménière's disease?

Ménière's disease is a disorder of the inner ear that causes severe dizziness (vertigo), ringing/roaring in the ears (tinnitus), hearing loss, and a feeling of fullness or congestion in the ear. Ménière's disease usually affects one ear. Approximately 50% of patients who do develop bilateral Ménière's Disease do so within two years, and 75% do so within five years. Bilateral Ménière's can be a cause for the need of cochlear implantation in some patients.

Attacks of dizziness may come on suddenly or after a short period of tinnitus or muffled hearing. Some people will have single attacks of dizziness separated by long periods of time. Others may experience many attacks closer together over a number of days. Some people with Ménière's disease have vertigo so extreme that they lose their balance and fall. These episodes are called "drop attacks." Ménière's disease can develop at any age, but it is more likely to happen to adults between 40 and 60 years of age.

What causes the symptoms of Ménière's disease?

The symptoms of Ménière's disease are caused by the buildup of fluid in the compartments of the inner ear, called the labyrinth. The labyrinth contains the organs of balance (the semicircular canals and otolithic organs) and of hearing (the cochlea). It has two sections: the bony labyrinth and the membranous labyrinth. The membranous labyrinth is filled with a fluid called endolymph that, in the balance organs, stimulates receptors as the body moves. The receptors then send signals to the brain about the body's position and movement. In the cochlea, fluid is compressed in response to sound vibrations, which stimulates sensory cells that send signals to the brain.

In Ménière's disease, the endolymph buildup in the labyrinth interferes with the normal balance and hearing signals between the inner ear and the brain. This abnormality causes vertigo and other symptoms of Ménière's disease.

Why do people get Ménière's disease?

Many theories exist about what happens to cause Ménière's disease, but no definite answers are available. Some researchers think that Ménière's disease is the result of constrictions in blood vessels similar to those that cause migraine headaches. Others think Ménière's disease could be a consequence of viral infections, allergies, or autoimmune



reactions. Because Ménière's disease appears to run in families, it could also be the result of genetic variations that cause abnormalities in the volume or regulation of endolymph fluid.

How does a doctor diagnose Ménière's disease?

Ménière's disease is most often diagnosed and treated by an otolaryngologist (commonly called an ear, nose, and throat doctor, or ENT). However, there is no definitive test or single symptom that a doctor can use to make the diagnosis. Diagnosis is based upon your medical history and the presence of:

- ~ Two or more episodes of vertigo lasting at least 20 minutes each
- ~ Tinnitus
- ~ Fluctuating hearing loss
- ~ A feeling of fullness in the ear

Some doctors will request hearing and vestibular tests to establish the extent of loss caused by Ménière's disease. To rule out other diseases, a doctor also might request magnetic resonance imaging (MRI) or computed tomography (CT) scans of the brain.

How is Ménière's disease treated?

Ménière's disease does not have a cure yet, but your doctor might recommend some of the treatments below to help you cope with the condition.

- ~ **Medications.** The most disabling symptom of an attack of Ménière's disease is dizziness. Prescription drugs such as meclizine, diazepam, glycopyrrolate, and lorazepam can help relieve dizziness and shorten the attack.
- ~ **Salt restriction and diuretics.** Limiting dietary salt and taking diuretics (water pills) help some people control dizziness by reducing the amount of fluid the body retains, which may help lower fluid volume and pressure in the inner ear.
- ~ **Other dietary and behavioral changes.** Some people claim that caffeine, chocolate, and alcohol make their symptoms worse and either avoid or limit them in their diet. Not smoking also may help lessen the symptoms.
- ~ **Cognitive therapy.** Cognitive therapy is a type of talk therapy that helps people focus on how they interpret and react to life experiences. Some people find that cognitive therapy helps them cope better with the unexpected nature of attacks and reduces their anxiety about future attacks.
- ~ **Injections.** Injecting the antibiotic gentamicin into the middle ear helps control vertigo but significantly raises the risk of hearing loss because gentamicin can damage the microscopic hair cells in the inner ear that help us hear. Some doctors inject a corticosteroid instead, which often helps reduce dizziness and has no risk of hearing loss.

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- ~ **Surgery.** Surgery may be recommended when all other treatments have failed to relieve dizziness. Some surgical procedures are performed on the endolymphatic sac to decompress it. Another possible surgery is to cut the vestibular nerve, although this occurs less frequently.
- ~ **Vestibular rehabilitation and fall prevention strategies.** After surgical or medical intervention vestibular rehabilitation, which is a customized group of head and eye exercises performed by an Audiologist or Physiotherapist, may be warranted in some patients to improve balance and reduce dizziness-related problems. General balance exercises may also help, not for the attacks of severe vertigo, but improving balance in-between attacks and for reducing fall risk.
- ~ **Alternative medicine.** Although scientists have studied the use of some alternative medical therapies in Ménière's disease treatment, there is still no evidence to show the effectiveness of such therapies as acupuncture or acupressure, tai chi, or herbal supplements such as ginkgo biloba, niacin, or ginger root. Be sure to tell your doctor if you are using alternative therapies, since they sometimes can impact the effectiveness or safety of conventional medicines.

Ménière's Disease and Migraines – how are they related?

Vestibular migraine is a type of migraine, which may or may not include a headache, that can cause ear related symptoms to hearing, vision, and balance. Vestibular migraine is more common than Ménière's Disease and accounts for 6 to 7% of patients in neurologic dizziness clinics and has been found in 9% of patients in a migraine clinic case series (Neuhauser, Leopold, von Brevern, Arnold, & Lempert, 2001; Dieterich & Brandt, 1999).

For Ménière's Disease, studies conducted in Finland, the United Kingdom, and the United States between 1970 and 2000 estimated the prevalence to be 0.043%, 0.20%, and 0.22%, respectively (Wladislavosky-Waserman, Facer, Mokri, & Kurland, 1984; Kotimäki, Sorri, Aantaa, & Nuutinen, 1999; Minor, Schessel, & Carey, 2004).

About 50% of people with Ménière's Disease also meet the criteria for migraine (Radke et. al., 2002). Symptoms can sometimes mimic each other. Patients are sometimes asked extensive questions about any migraine history and/or to fill out a migraine/dizzy diary to help distinguish between the two disorders. Some patients have both problems, and for some, a migraine attack can cause a Ménière's attack and vice versa. Letting physicians know about any migraine history or symptoms is important in the diagnosis and management of Ménière's Disease.

Why is mental health so important with Ménière's disease?

Living with a vestibular disorder can be very difficult because it can be an invisible problem, is difficult to describe to other people what it is like, is unpredictable at times, and can impact your ability to do the things you love to do. It is important to not only focus on the physical consequence of a vestibular disorder but the emotional consequences as well. Some people with Ménière's Disease can have emotional triggers which set off their attacks such as stress, overwork, fatigue, and emotional distress. It is important to discuss any stress, anxiety, or depression you may be having to your audiologist or physician. They may suggest coping strategies or a referral to a psychologist to help manage symptoms and improve quality of life.

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