



ARKANSAS OTOLARYNGOLOGY CENTER

EAR | NOSE | THROAT

Ménière's Disease

Affecting the inner ear, Ménière's disease is a condition that causes vertigo (attacks of a spinning sensation), hearing loss, tinnitus (a roaring, buzzing, or ringing sound in the ear), and a sensation of fullness in the affected ear. Because Ménière's disease affects each person differently, your doctor will suggest strategies to help reduce your symptoms and will help you choose the treatment that is best for you.

What is Ménière's disease?

Ménière's Disease is named for the Frenchman Prosper Ménière who first described the syndrome in the mid 1800's. The syndrome, also called idiopathic endolymphatic hydrops, is a disorder of the inner ear. Although the cause is unknown, it probably results from an abnormality in the fluids of the inner ear. Ménière's disease is one of the most common causes of dizziness originating in the inner ear. In most cases only one ear is involved, but both ears may be affected in about 15 percent of patients. Ménière's disease typically starts between the ages of 20 and 50 years. Men and women are affected in equal numbers.

What are the causes?

Although the cause is unknown, it probably results from an abnormality in the fluids of the inner ear. The theory is that too much inner ear fluid accumulates either due to excess production or inadequate absorption. In some individuals, especially those with involvement of both ears, allergies or autoimmune disorders may play a role in producing Ménière's disease.

People with Ménière's disease have a "sick" inner ear and are more sensitive to factors, such as fatigue and stress that may influence the frequency of attacks.

How is a diagnosis made?

The physician will take a history of the frequency, duration, severity, and character of your attacks, the duration of hearing loss or whether it has been changing, and whether you have had tinnitus or fullness in either or both ears. When the history has been completed, diagnostic tests will check your hearing and balance functions. They may include:

For hearing:

- An audiometric examination (hearing test) typically indicates a sensory type of hearing loss in the affected ear. Speech discrimination (the patient's ability to distinguish between words like "sit" and "fit") is often diminished in the affected ear.

For balance:

- An ENG (electronystagram) may be performed to evaluate balance function. In a darkened room, recording goggles are placed over the eyes. Warm and cool water or air is gently introduced into each ear canal. Since the eyes and ears work in coordination through the nervous system, measurement of eye movements can be used to test the balance system. In about 50 percent of patients, the balance function is reduced in the affected ear.
 - Computerized Dynamic Posturography may also be performed to evaluate the balance system.

What are the symptoms?

Symptoms of Ménière's disease include episodic vertigo (attacks of a spinning sensation), hearing loss, tinnitus (a roaring, buzzing, or ringing sound in the ear), and a sensation of fullness in the affected ear.

Vertigo is often accompanied by nausea and vomiting. Attacks may last for 20 minutes to two hours or longer and fatigue and an off-balance sensation may last for hours to days. During attacks, patients may be unable to perform their usual activities, needing to lie down until the vertigo resolves.

Hearing loss is often intermittent, occurring mainly at the time of the attacks of vertigo. Loud sounds may seem distorted and cause discomfort. Usually, the hearing loss involves mainly the lower pitches, but over time this often affects tones of all pitches. After months or years of the disease, hearing loss often becomes permanent.

Tinnitus and fullness of the ear may come and go with changes in hearing, occur during or just before attacks, or be constant.

How is it treated?

Treatment may include:

- A low salt diet and a diuretic (water pill)
- Other lifestyle changes especially routine exercise and attempts to control of stress
- Intermittent anti-vertigo medications, e.g. lorazepam, diazepam or meclizine.
- Intratympanic injections
- Surgical intervention

Your otolaryngologist will help you choose the treatment that is best for you, as there are things to consider with each. For example, while anti-vertigo and anti-nausea medications will reduce dizziness, they may cause drowsiness and can prologue the dizziness after a spell. Other treatments also carry both positive implications as well as drawbacks. When is surgery recommended? The vast majority of patients with Meniere's disease are controlled with medication and lifestyle changes.

If vertigo attacks are not controlled by conservative measures and are disabling, one of the following surgical procedures might be recommended:

- Intratympanic gentamicin injections: This is done with 2 out-patient injections of gentamicin into the middle ear. Some of the gentamicin enters the inner ear through the membranes separating the middle and inner ear. The aim of the procedure is to reduce the irritability of the inner ear and control the spells.
- The endolymphatic sac shunt or decompression procedure is an ear operation that usually preserves hearing. Attacks of vertigo are controlled in one-half to two-thirds of cases, but control is not permanent in all cases. Recovery time after this procedure is short compared to the other procedures.
- Selective vestibular neurectomy is a procedure in which the balance nerve is cut as it leaves the inner ear and goes to the brain. While vertigo attacks are permanently cured in a high percentage of cases, patients may continue to experience imbalance. Similar to endolymphatic sac procedures, hearing function is usually preserved.
- Labryrinthectomy and eighth nerve section are procedures in which the balance and hearing mechanism in the inner ear are destroyed on one side. This is considered when the patient with Ménière's disease has poor hearing in the affected ear. Labryrinthectomy and eighth nerve section result in the highest rates for control of vertigo attacks.

Although there is no cure for Ménière's disease, the attacks of vertigo can be controlled in nearly all cases.

What should I do during an attack?

Frequently there is a period of increased ear fullness before a spell. Additional diuretics and occasional use of sedatives may prevent a spell. If a vertigo spell starts, take a lorazepam tablet or the sedative prescribed, lie flat and still and focus on an unmoving object. Often people fall asleep while lying down and feel better when they awaken. If spells are becoming more frequent, the medications need to be adjusted or occasionally intervention should be considered.

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