

Meniere's Disease

Meniere's Disease is a disorder of the inner ear that results in sudden attacks of severe dizziness and change in hearing in those affected. In Meniere's Disease, too much fluid (called 'endolymph') builds up in the inner ear, affecting the sensory systems that maintain balance and hearing. Little is known about the cause of fluid build-up. It may be that too much fluid is produced, or that the fluid does not drain properly from the inner ear, or it may be a combination of the two. Once the body is able to get the fluid back in balance, the attack resolves and you feel back to normal.

Symptoms:

- Vertigo attacks that occur suddenly and last from several minutes to several hours. Vertigo is a sense of the room spinning or whirling. This is often bad enough to cause severe nausea and vomiting.
- Tinnitus: a low pitched, roaring, ringing or hissing sound in the ear during the attack.
- Hearing loss (often to low pitched sound) that returns to normal between attacks (at least initially).
- Aural fullness: a feeling of pressure or fullness in the ear during the attack.
- Drop attacks: a sudden fall while walking or standing. The attacks are described as being suddenly pushed to the ground. There is no loss of consciousness, and complete recovery usually occurs within seconds to minutes. Only a few people with Meniere's Disease experience these.

In most cases, these symptoms only occur during an attack, with perhaps some residual unsteadiness or nausea for a little while after the attack subsides. However, as time goes on the inner ear can be permanently damaged and there may be some degree of hearing loss, tinnitus or unsteadiness that is always present.

Meniere's Disease usually only affects one ear. In about one in five people the disease may eventually affect both ears.

Before attacks:

Sometimes you may get the sense that an attack is about to occur. The signal may be:

- An increased feeling of pressure in the ear,
- Sounds might seem louder than normal,
- Nausea: a few people have nausea before an attack. Nausea can have many causes, so having it doesn't always mean an attack is about to happen.

Investigations:

There is no one test that will confirm the diagnosis of Meniere's Disease, and in most cases your doctor will make this diagnosis based on the story you tell him/her and their findings when they examine you.

Because there are many other causes of vertigo and hearing loss other than Meniere's Disease, your doctor may arrange more tests to confirm that you do not have another cause for your symptoms, and to provide support for the diagnosis of Meniere's Disease.

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Additional tests may include:

- Vestibular Function Tests ("Balance Tests"): these are done in a specially equipped laboratory to test the balance system of the inner ear. They include a test called 'electronystagmography' which uses electrodes to measure eye movements. It looks for characteristic eye movements that occur when the inner ear is stimulated. The pattern of eye movements can indicate the location of the cause of vertigo, such as the inner ear or the central nervous system.
- Imaging tests such as MRI or CT (a 'CAT scan') which may be done if symptoms could be caused by a problem with the hearing nerve itself or the brain.
- Hearing tests (an 'audiogram') can detect any hearing loss and in some cases can demonstrate the hearing loss during an attack and it's subsequent return to normal. A specific hearing test, called a brainstem auditory evoked response (bAER) study, may be done to determine if the hearing nerve is working correctly. Another specific hearing test called 'electrocochleography' can also be performed, and in some cases can help to confirm the diagnosis of Meniere's Disease.

Treatment:

Although Meniere's Disease cannot be cured, treatment is available to control symptoms and reduce the frequency of attacks, thereby reducing the disease's impact on your life.

Lifestyle Changes:

- Avoid recognised triggers for attacks: some people note their attacks are more common when they are tired, under significant stress or pressure, or at certain times in the menstrual cycle in the case of some women. Avoiding situations which can cause your attacks can go a long way to reducing their frequency and severity.
- Diet: restricting caffeine is well recognised to reduce attacks in many people. Avoid coffee, tea, cola drinks and 'stimulant' drinks like Red Bull, 'V' etc. Many other people can identify specific foods and beverages that bring on attacks for them. Keep a food/beverage diary for a few weeks to see if you can identify your own triggers. Alcohol and tobacco are other common triggers for attacks: quit smoking and minimise/stop alcohol intake.
- Low salt diet: the recommended daily intake of salt ('sodium') in Australia is 2300mg/day. Evidence exists that restricting sodium to less than 1000mg/day can reduce the severity of Meniere's Disease. See the attached information sheet on "Meniere's Diet" for more advice about reducing salt in your diet.
- Allergies: if you are susceptible to attacks with specific foods or other allergic triggers, desensitisation and avoidance of triggers may reduce frequency of attacks.

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Medications:

These do not cure Meniere's Disease, but they can reduce the severity of some symptoms and make you more comfortable during an attack:

- Medication such as diuretics can reduce the accumulation of fluid in the inner ear.
- A medication called betahistine ('Serc') affects the balance of fluid in the middle ear directly.
- Taking vestibular suppressant medication (such as steroids, antihistamines or sedatives) to calm the inner ear during an acute attack.
- Your ENT surgeon may recommend injecting a medication into the middle ear (usually after a grommet has been placed) to stop the acute vertigo attacks. This is usually only considered if more simple measures have failed, as there is a greater chance of significant side effects or complications.

Surgery:

Surgery for Meniere's Disease can cause permanent damage to your hearing. It may be considered for people with Meniere's Disease who:

- Have persistent or frequent attacks of severe vertigo that do not improve with medication use.
- Have symptoms that are so debilitating that it becomes difficult to get through the events of daily life.
- Are affected in only one ear.

Surgical options include:

- Endolymphatic sac decompression: that removes some of the bone surrounding the inner ear
- Endolymphatic shunt, which inserts a tube to remove excess fluid from the inner ear
- Labyrinthectomy: where your surgeon removes the inner ear completely. This stops the acute attacks of vertigo, but also results in permanent and total loss of hearing on that side.

Prognosis:

In most patients, attacks (although distressing while they last) are relatively infrequent and life can go on essentially as normal between them. They are usually most frequent when the disease first starts, then decrease in frequency over time. In a small number of people, attacks remain frequent, severe, and are very debilitating.

In most cases, after a certain amount of time the inner ear becomes permanently damaged, and the frequency and severity of attacks diminish. At this point, it is common to experience:

- Poor balance (especially on uneven ground or in poor lighting),
- Permanent hearing loss,
- Residual roaring or hissing in the ear.