

What if conservative measures don't help?

If vertigo attacks are not controlled by conservative measures and are disabling, surgical procedures might be recommended. CT Scans and other testing should be done. Surgery and other invasive treatments should be considered as *a last resort*.

- **Intratympanic treatment**, also known as chemical labyrinthectomy, is an office procedure in which a medicine, such as Gentamicin, is injected into the middle ear. Other medicines may be used. Gentamicin is an ototoxic antibiotic that causes a partial loss of balance function in the treated ear, controlling vertigo in about three fourths of cases and usually preserving hearing. Apart from a period of disequilibrium that can occur as the patient adjusts to the new level of balance function, this treatment is usually very well tolerated. It is also significantly simpler and less invasive than other surgical treatments.
- The actual cause of the fluid accumulation in the inner ear, the condition that sets off the whole process, is not known. Research that revealed fluid build up in the inner ear of animals, leads many doctors to suggest the most commonly performed operation, the **endolymphatic shunt or decompression**. This procedure is an

ear operation that usually preserves hearing. An incision is made behind the involved ear exposing the mastoid bone. The endolymphatic sac is identified and opened. A tiny silicone tube is positioned into the sac to allow for future drainage when fluid reforms. The operation takes about an hour.

In theory, the endolymphatic sac operation should decompress the excessive fluid within the inner ear chambers and allow the inner ear to re-equilibrate, taking pressure off the hearing and balance nerve endings. Studies have shown little positive effect on hearing from this drainage. This surgery does NOT cure Ménière's and may offer only temporary relief. Vertigo subsides after surgery in about 70 percent of Ménière's cases, but vertigo symptoms recur with the same severity as before in a significant number of individuals within three years of surgery.¹

- **Selective vestibular neurectomy** (or VNS – Vestibular Nerve Section) is considered a more reliable operation, but with more risk and side effects. If there is substantial hearing present, the vestibular neurectomy may be a preferred surgical option. In this procedure the vestibular nerve, which serves balance, is severed so that it no longer sends distorted messages to the brain. But the balance nerve is very close to the hearing and facial nerves.

¹ Ear Surgery Information Center, Mark J. Levenson www.earsurgery.org

Thus, the risk of affecting a patient's hearing or facial muscle control increases. The operation is a team effort performed by an ear surgeon and a neurosurgeon. Since the nerve must be identified as it exits the brain, the vestibular neurectomy is an intracranial operation. Older patients often have difficulty recovering from this type of surgery.² Vertigo attacks are permanently cured in a high percentage of cases, and hearing is preserved in most cases.

Close post-operative monitoring is required. This minimally invasive operation takes less than two hours. A hospital stay of three or four days, including one to two days in ICU, is usually necessary. Recovery can take several months and Balance Retraining Therapy is required.

- **Labyrinthectomy** and eighth nerve section are procedures in which the membranous labyrinth is removed in an irreversible procedure. In a process similar to the VNS, the inner ear balance organ (the labyrinth) is exposed. The semicircular canals are then carefully drilled away exposing the balance nerve, which is completely removed. This procedure destroys hearing in the operated ear – an important consideration since the second ear may one day be affected. This is usually only considered when

² NIDCD Health Information, Hearing and Balance www.nidcd.nih.gov/health/pubs

the patient has poor hearing in the affected ear. Labyrinthectomy and eighth nerve section result in the highest rates for control of vertigo attacks.

Following surgery, there is often severe vertigo for a day or two. This can be controlled with medication. After a week, the patient experiences a period of moderate imbalance without vertigo while the opposite ear takes command of the entire balance function and assumes full control. This period can last six to eight weeks. The more active an individual is after surgery, the more rapid the recovery of balance function will be.

The two inner ear balance centers can be thought of as gyroscopes. If one gyroscope is faulty, the brain has trouble adapting since it is getting wrong signals along with correct ones. If the “faulty gyroscope” is removed, the brain will adapt to this new situation since it now receives only correct signals.

In a young individual, surgery that conserves the remaining hearing in the ear affected by Ménière’s is most important. A certain percentage of young people with Ménière’s may also develop the illness in their opposite ear later in their lifetime: 10 to 20 percent.³

³ Ear Surgery Information Center, Mark J. Levenson www.earsurgery.org

What are the side effects of surgery?

Disequilibrium Most people can adjust to loss of balance with Balance Retraining Therapy, although they often complain of a “bouncing up and down feeling” when walking.

The horizon may also seem to move up and down with their steps. This sensation is called **Oscillopsia**.

Permanent **hearing loss** will result from the Labyrinthectomy.

Disclaimer: Although this information is intended to reach out to others and offer support, comfort and advice, it is in no way intended to take the place of examination, diagnosis, opinion, or treatment provided by a licensed and qualified health professional.

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www.menieresresources.org

Meniere’s Resources, Inc.
8831 Ditzler
Kansas City, MO 64138



Surgical Options

What to do when medical therapy and rehabilitated lifestyle do not prevent vertigo attacks.

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