

OTOSCLEROSIS

Your physician has found that you likely have otosclerosis contributing to your hearing loss- this is a common cause of hearing impairment. The cause is unknown and can be hereditary in nature.

Otosclerosis is abnormal growth of bone of the MIDDLE ear that prevents structures within the ear from conducting sound properly causing hearing loss (conductive hearing loss). Most often it involves the smallest ear bone (stapes) and prevents normal movement and sound transmission.

It also occasionally involves the INNER ear structures and causes a sensorineural or mixed hearing loss, which may not be improved with surgical intervention alone. Rarely, the otosclerosis may also spread to the balance canals and cause episodes of unsteadiness. The amount of hearing loss due to involvement of the stapes and the degree of inner ear impairment can be determined only by a hearing test. The disease may affect one or both ears.

The conductive hearing loss is often correctable by surgery or use of hearing aids. In some cases, an over-the-counter medication containing fluoride may be prescribed to slow the loss of hearing if an inner ear contribution is identified. Hearing aids are a good choice for hearing improvement in patients who do not wish to have surgery or in whom surgery is not recommended.

Surgical Description

The operation used to correct the MIDDLE ear conductive hearing loss is called a stapedotomy or partial stapedectomy. Your ear surgeon will determine if you are an appropriate candidate for surgery based on your hearing test, degree of hearing loss, and medical history. This operation may be performed under local or general anesthesia and is typically outpatient. Over 95 percent of these operations are successful in restoring the hearing permanently.

This procedure is performed through the ear canal and in addition, a small incision may also be made behind the ear to remove additional tissue to cover the new opening in the inner ear.

Hearing improvement will not likely be noticeable at the time surgery or immediately afterward due to the packing material and fluid within the ear from surgery. Improvement is expected at 4-6 weeks after surgery, with the maximum result at approximately six months after the prosthesis is adequately scarred into place.

Risks of Surgery

Most patients experience significant improvement in hearing and quality of life. In 1-2% of patients the hearing may be worsened due to the infection, bleeding or inflammation of the inner ear, a leak of inner ear fluid (fistula), or scar formation causing movement of the prosthesis. There is also a small chance (approximately 1%) the hearing may be damaged, causing complete hearing loss to occur. This may occur even in cases where the operation and recovery go perfectly. At times when there is a significant degree of neural hearing loss in addition to the conductive hearing loss a hearing aid may still be required after surgery, as this type of hearing loss cannot be corrected with an operation.

Taste disturbance is common following surgery as a small taste nerve (chorda tympani) runs under the eardrum and may be stretched or cut during the operation. This is often temporary lasting weeks to months but can be permanent. The facial nerve also travels in the middle ear space and is always at risk during ear surgery. This is monitored during the operation and rarely ever injured (less than 1%). In addition, there is always a risk of increased or development of head noise (tinnitus), temporary unsteadiness or imbalance, vertigo (spinning sensation), or perforation of the eardrum.