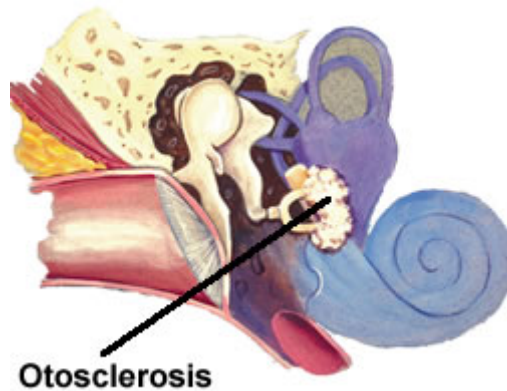


Otosclerosis

What is Otosclerosis?

Otosclerosis is the abnormal growth of bone in the middle ear. This bone growth prevents structures within the ear from working properly and causes hearing loss. For some people the hearing loss may become severe.



What are the symptoms of Otosclerosis?

Hearing loss is the most prevalent symptom of otosclerosis. The loss appears gradually and typically progresses. Many people with otosclerosis first notice that they cannot hear low-pitched sounds or that they no longer hear a whisper.

In addition to hearing loss, people with otosclerosis may experience dizziness or a loss of balance, and/or tinnitus (ringing in the ears).

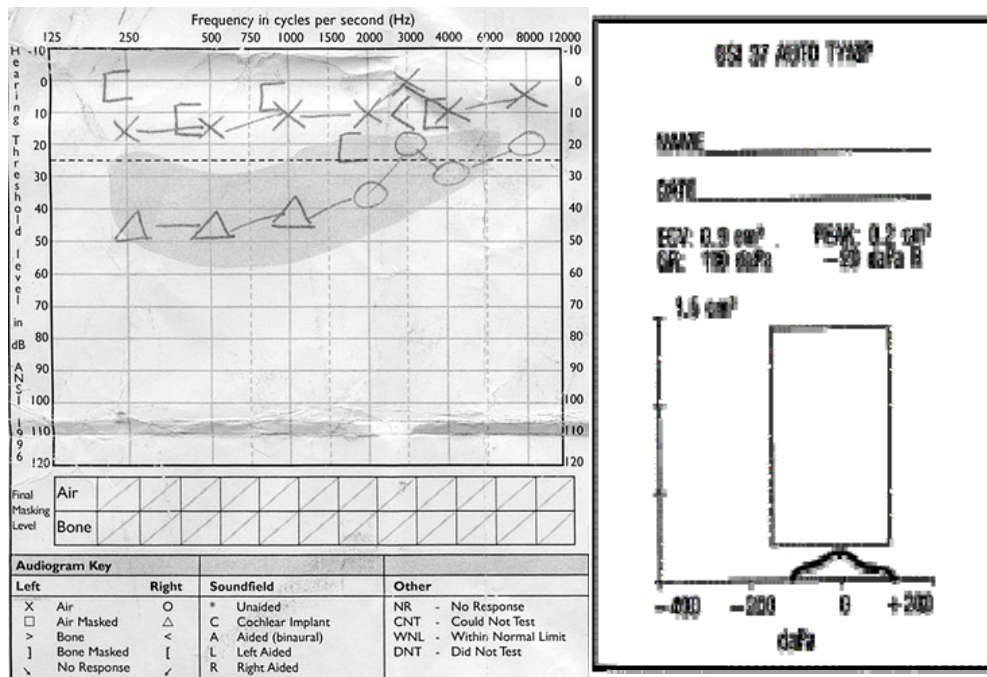
How does Otosclerosis cause hearing impairment?

Otosclerosis generally affects the last bone of the chain within the middle ear, the stapes, which rests in the entrance to the inner ear (oval window). The abnormal bone growth fixates the stapes in the oval window and interferes with sound waves passing to the inner ear.

Otosclerosis usually causes a conductive hearing loss, a hearing loss caused by a problem in the outer or middle ear. Less frequently, otosclerosis may cause a sensorineural hearing loss (damage to the sensory cells and/or nerve fibers in the inner ear).

How is Otosclerosis diagnosed?

An Audiologist/Practitioner uses a variety of tests and procedures to assess hearing and balance function; an audiogram and tympanogram. This is followed by an examination by an ENT specialist to rule out other diseases or health problems that may cause these same symptoms.

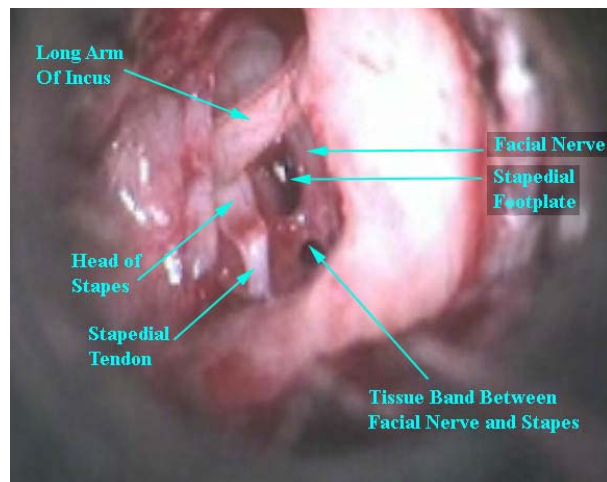
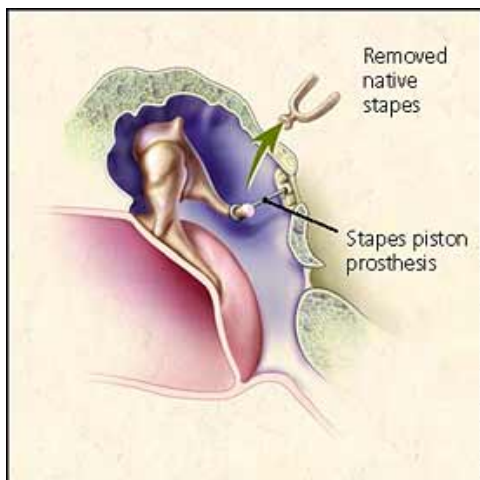


What causes Otosclerosis?

The cause of otosclerosis is not fully understood, although research has indicated that otosclerosis tends to run in families and may be hereditary. People who have a family history of otosclerosis are more likely to develop the disorder. Research shows that white, middle-aged women are most at risk. Some research suggests a relationship between otosclerosis and the hormonal changes associated with pregnancy. While the exact cause remains unknown, there is some evidence associating viral infections (such as measles) and otosclerosis.

How is Otosclerosis treated?

In many cases surgery is an option for treatment of otosclerosis. A Stapedectomy (removal of the stapes bone) may be performed and replaced with a prosthetic device that allows sound waves to be passed to the inner ear. If the hearing loss is mild, surgery may not be an option. In some instances, hearing loss may persist after surgery. A hearing aid is helpful for the majority of people with otosclerosis.



The most serious risk of a stapedectomy is an increased hearing loss, which occurs in about one percent of patients. Because of this risk, a stapedectomy is usually performed on only one ear at a time.

Less common complications include:

- temporary change in taste (due to nerve damage) or lack of taste
- perforated eardrum
- vertigo that may persist and require surgery
- damage to the chain of three small bones attached to the eardrum
- temporary facial nerve paralysis
- ringing in the ears

What research is being done on otosclerosis?

Scientists are conducting research to improve their understanding of otosclerosis. Genetic studies continue in order to identify the gene or genes that may lead to this disorder. Other researchers are studying the effectiveness of lasers currently used in surgery, amplification devices, and of various stapes prostheses. Improved diagnostic techniques are also being examined and developed.