# **MENIERE'S DISEASE**

## **AN OVERVIEW**

## Compiled by

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#### **IMPORTANT**

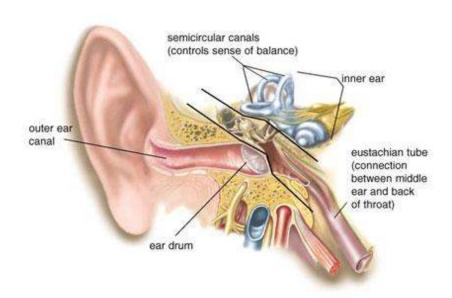
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#### Introduction

Meniere's disease is a chronic disease of the inner ear characterized by recurrent vertigo, tinnitus, and hearing loss.

(Picture below - Inner Ear)



### **Causes and Incidence**

The cause of Meniere's disease is unknown, although a genetic link has been suggested. Other theories have proposed trauma, infection, otosclerosis, or syphilis as inciting factors. Adults of both genders between 30 and 60 years of age are usually affected, and most cases are unilateral although 15% to 30% become bilateral 2 to 5 years after a unilateral onset.

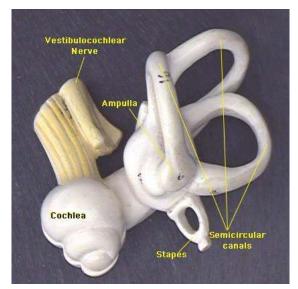
#### **Disease Process**

The pathogenesis of Meniere's disease is poorly understood but is thought to center on overproduction or decreased absorption of endolymph, which causes a degeneration of the neural end organ of the labyrinth and cochlea and rupture of the labyrinth. The rupture allows endolymph into the perilymphatic space, causing a temporary paralysis of sensory structures.

(Picture right - Cochlea)

## Symptoms

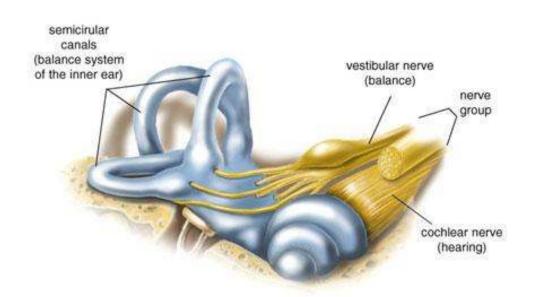
The hallmark manifestations are an attack of prostrating vertigo with nausea and vomiting, worsening tinnitus, and sensory hearing loss with a feeling of fullness or pressure in the affected ear. The attack may last from a few hours to a day and



then gradually subsides. Between acute attacks the person suffers a progressive hearing loss and a persistent background humming and has an intolerance to loud noises.

**Vertigo Note:** Vertigo is a sensation of spinning, dizziness, or of rotation. A person's sensation of rotating in space is termed subjective vertigo. The sensation of objects moving around a person is called objective vertigo. True vertigo involves a spinning sensation and is thus distinguished from faintness or dizziness. The cause may be a disturbance in the balance organs, including the semicircular canals and vestibular nuclei in the inner ear. Treatment depends upon the precise cause/pathology.

(Picture below - Organ of Balance)



## **Potential Complications**

Progressive hearing loss is the primary complication.

### **Diagnostic Tests**

A history of the characteristic symptoms and a positive caloric test are indicative of Meniere's disease.

#### Treatments

**Surgery** - Decompression of the endolymphatic sac helps in about 65% of cases; labyrinthectomy or vestibular neurectomy to destroy end organs and neural connections relieves vertigo in 90% of cases, with stabilization or improvement of hearing loss in 75% of cases

**Drugs** - Vestibular suppressants, anticholinergics for symptomatic relief of vertigo; antiemetics and sedatives to prevent vomiting and promote rest during acute attack; diuretics, antihistamines, and vasodilators during remission

**General** - Bed rest with safety precautions; avoidance of sudden head movements during acute attack; low-sodium diet to reduce fluid retention is helpful in some cases

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