

# Vestibular System

## Definition

The vestibular system is responsible for maintaining balance, posture, and orientation, along with helping your eyes maintain focus on objects as the body moves.

## Structure

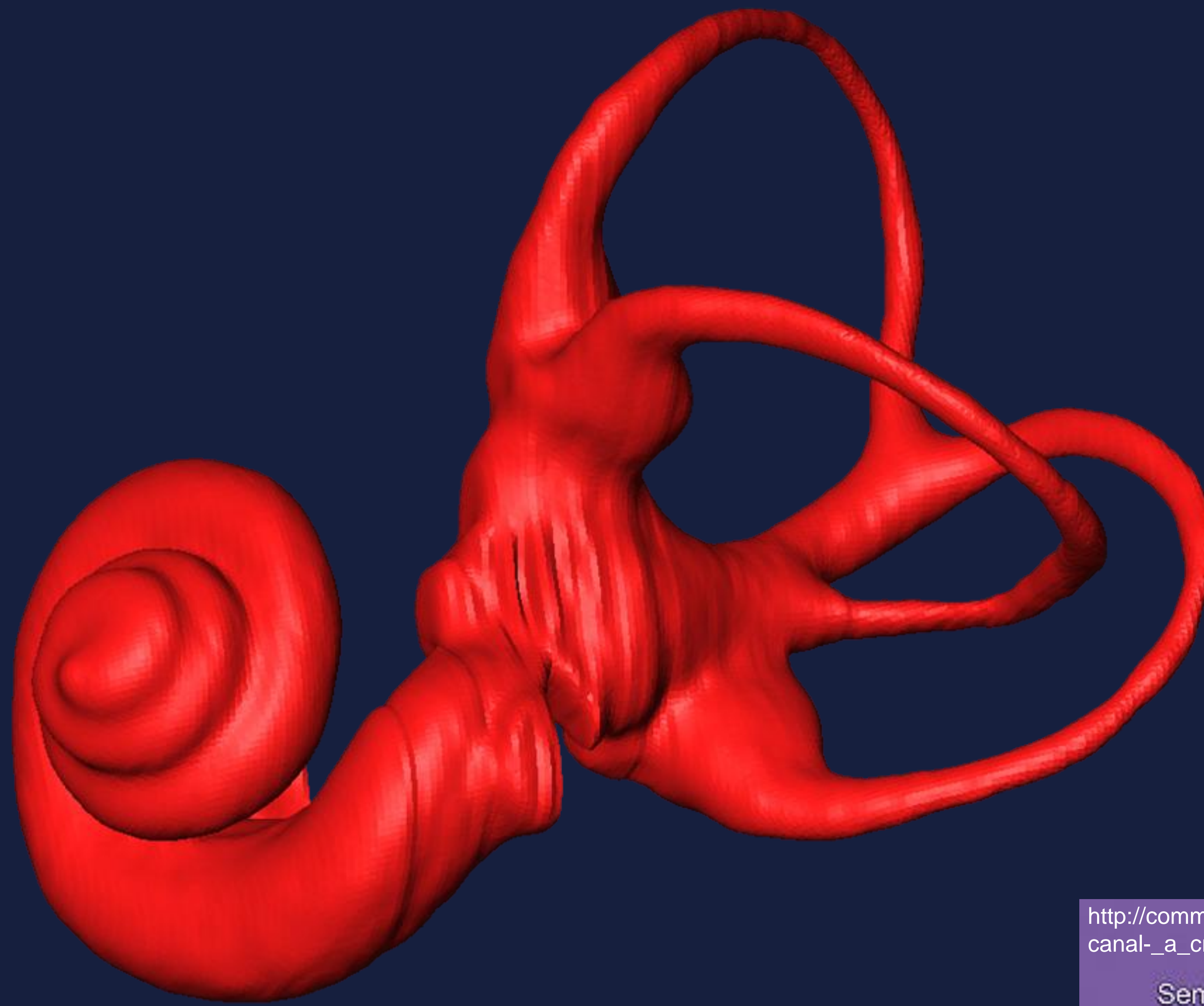
The vestibular system contains three semicircular canals located in the inner ear. Each of these canals have a cupula, hair filaments, hair cells, a vestibular nerve, and contain endolymph fluid (*Figure 2*).

## Function

As the body rotates, it causes the endolymph fluid in the ear to move; this pushes on hair filaments that are attached to the vestibular nerve, which sends an electrical signal to the part of the brain that processes orientation and controls eye movement. The eye then works to focus its vision as the body rotates.

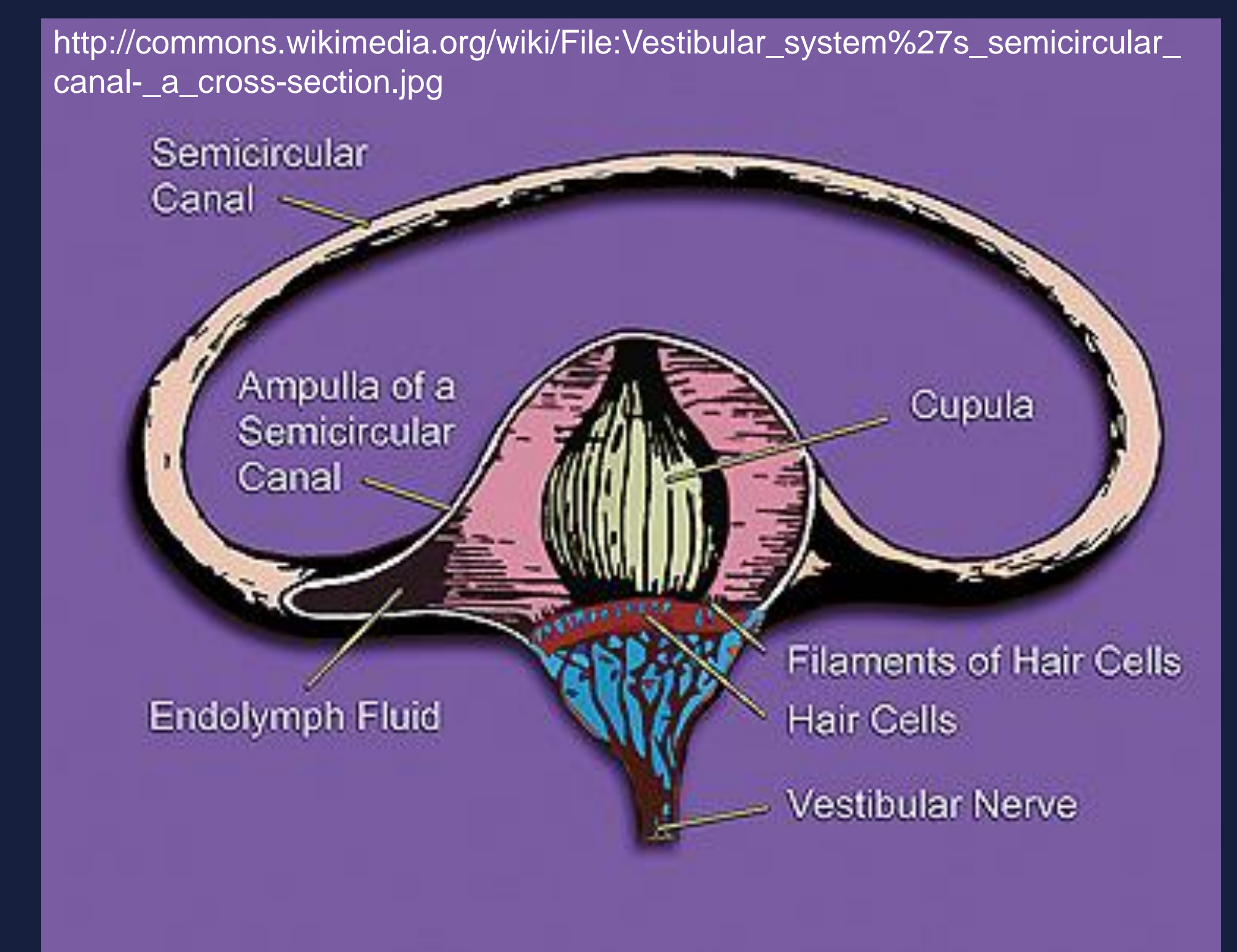
## Dizziness

If the body rotates and comes to a stop, the endolymph fluid will continue its movement and continue acting on the hair filaments so the brain still receives the signal that it is spinning. We in turn feel disoriented, or “dizzy,” and feel like everything is spinning.

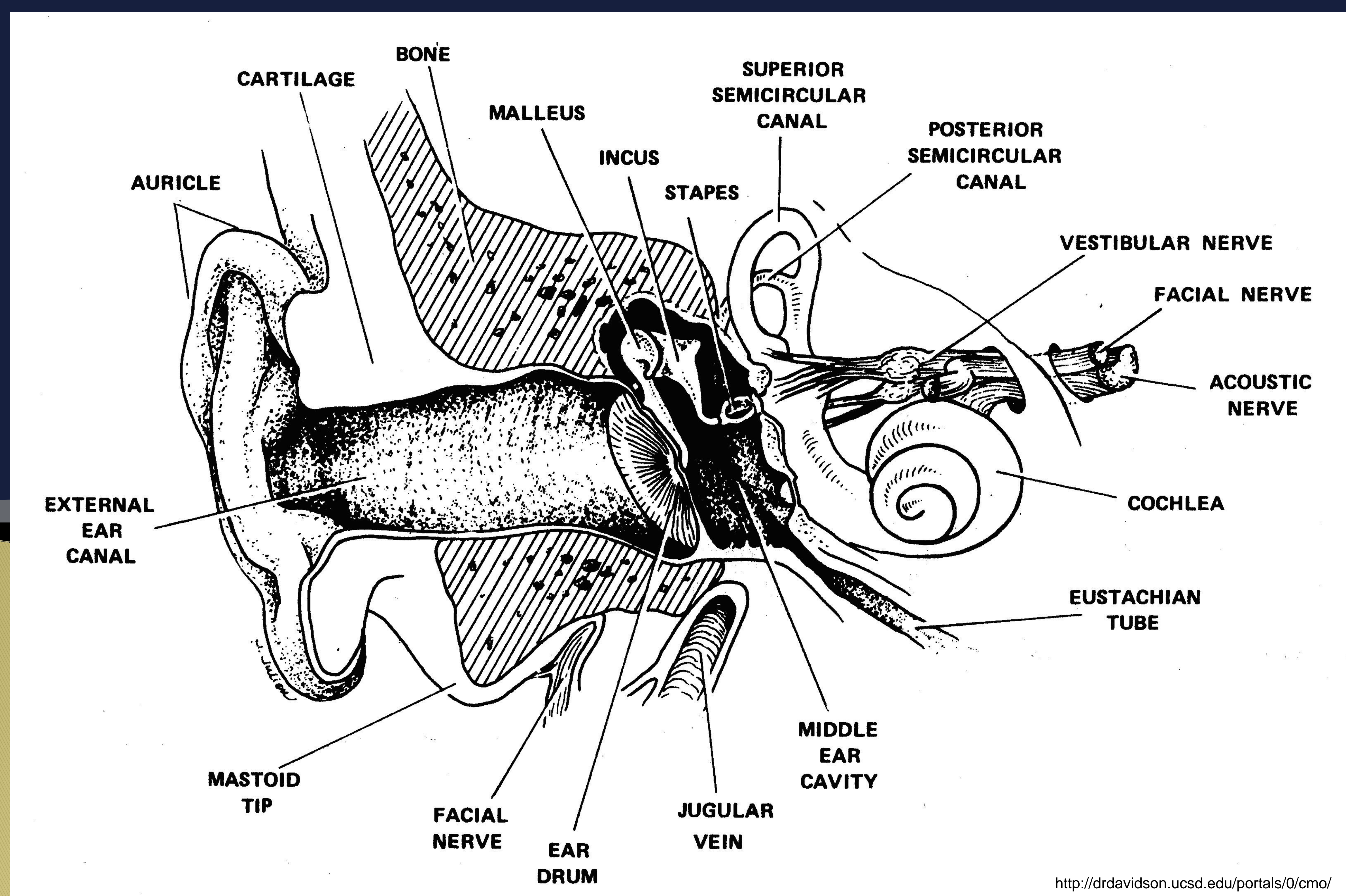


*Figure 1: Vestibular System*

<http://www.science.psu.edu/news-and-events/2007-news/Walker6-2007.htm>



*Figure 2: Semicircular Canal*



<http://drdavidson.ucsd.edu/portals/0/cmo/>

*Figure 3: Outer and Inner Ear*