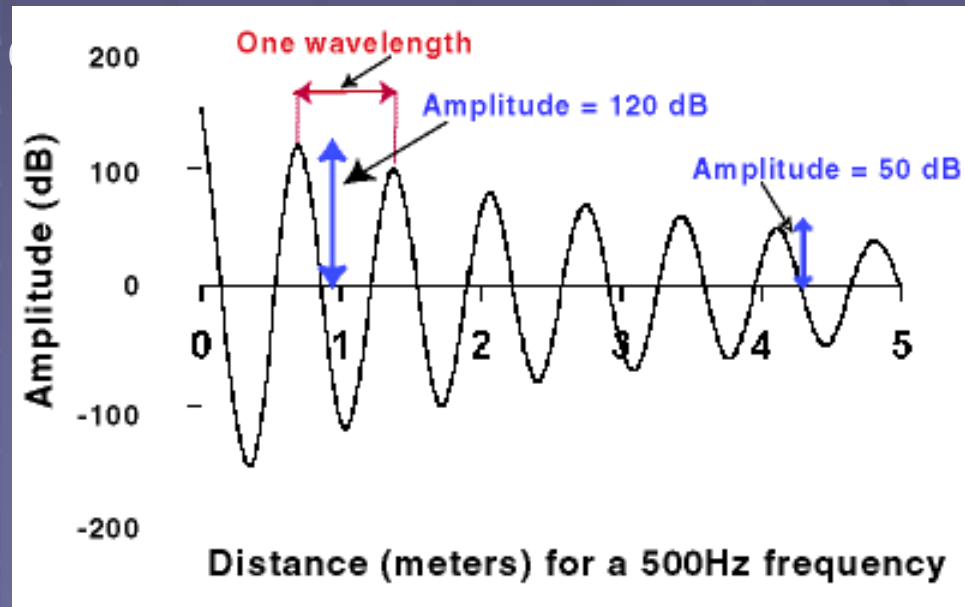


The Special Senses

3) Auditory

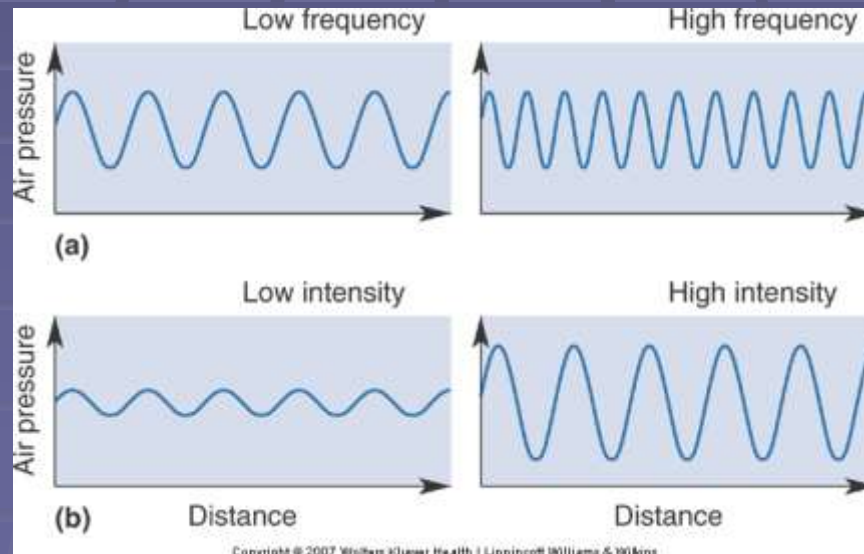
The Nature of Sound

- All waves have basic characteristics:
 - Amplitude
 - Frequency
 - Wavelength
- These properties have particular names with reference to sound
 - Amplitude = loudness
 - Frequency = pitch

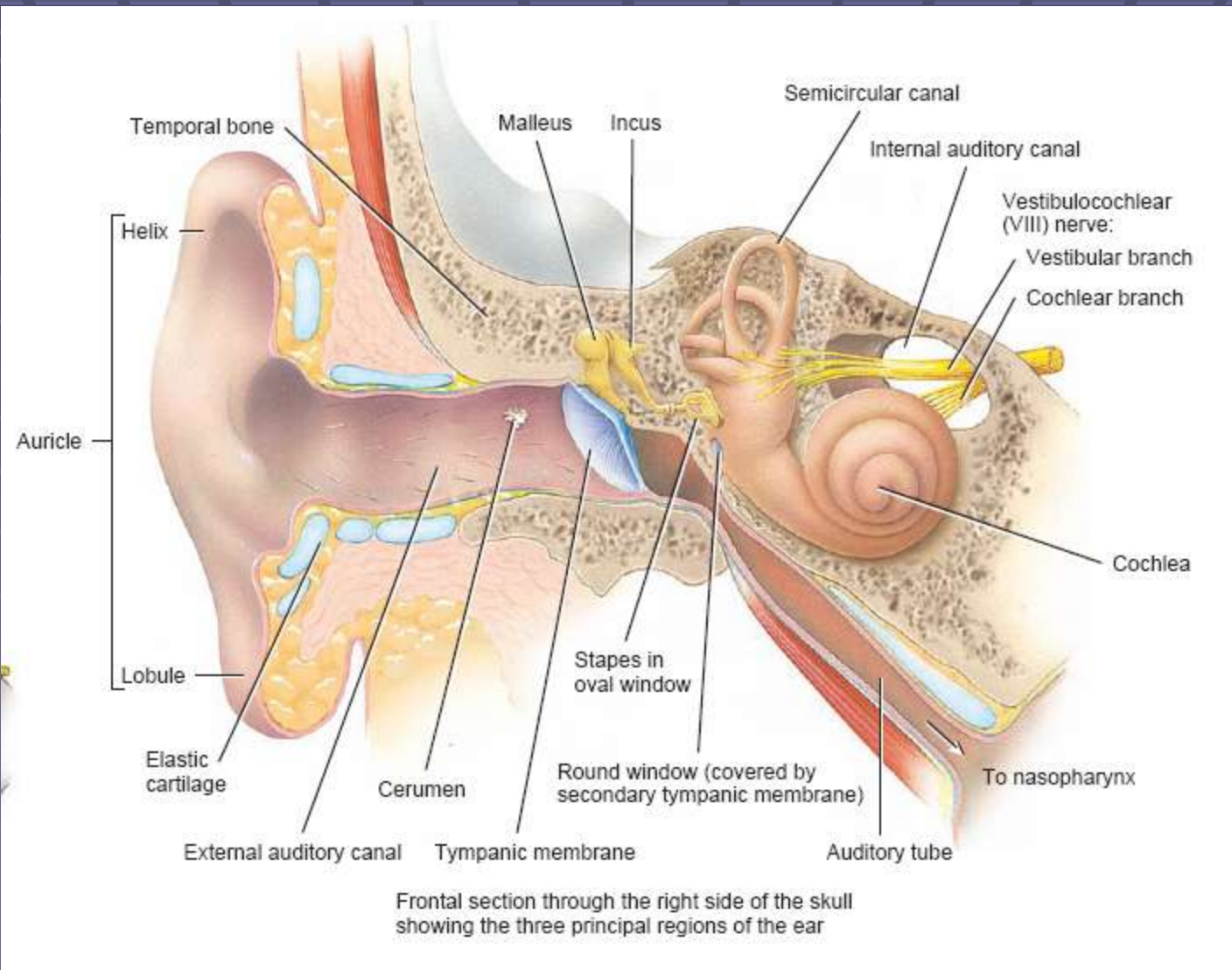


The Nature of Sound

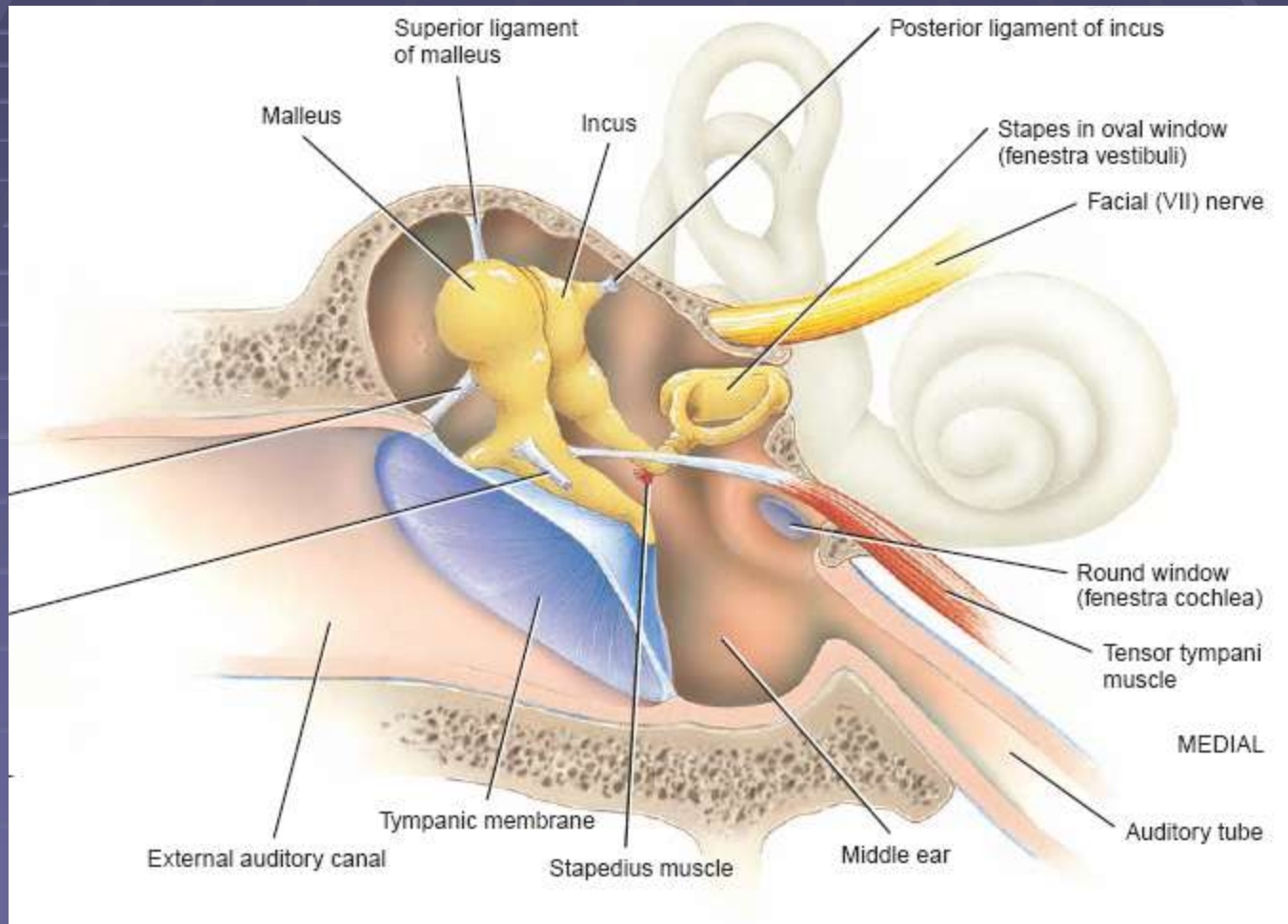
- Sound
 - Range: 20 Hz to 20,000 Hz
 - Pitch: High pitch = high frequency; low frequency = low pitch
 - Intensity: High intensity louder than low intensity

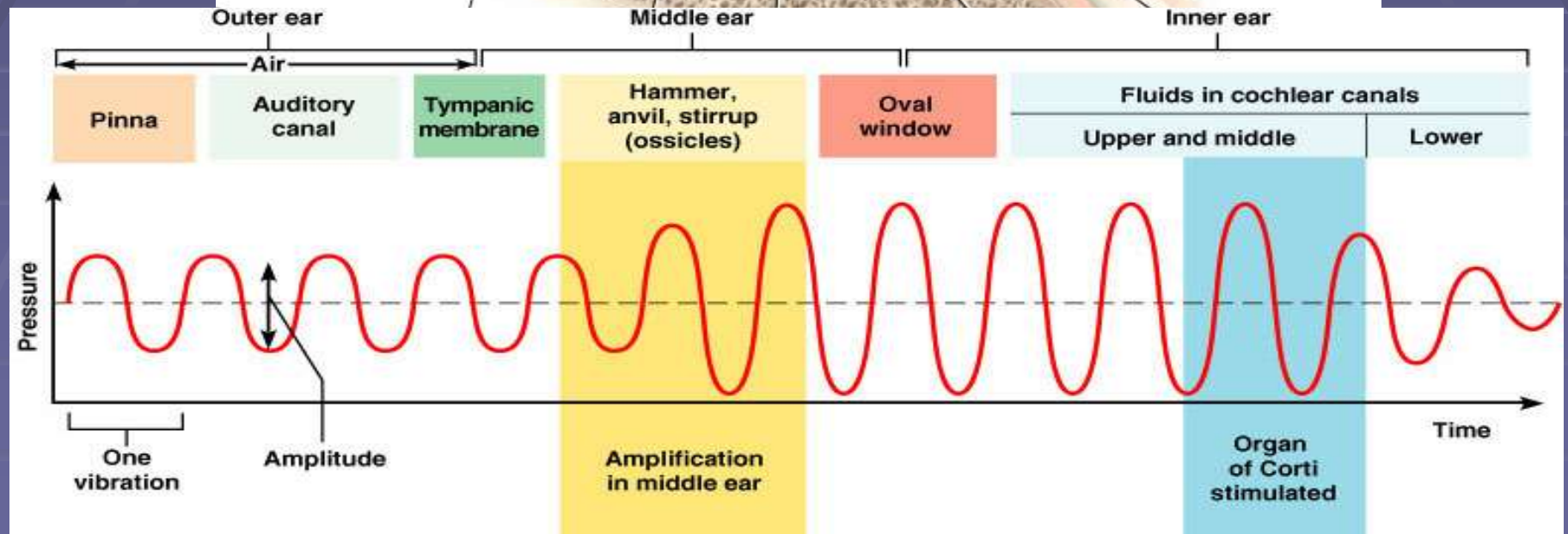
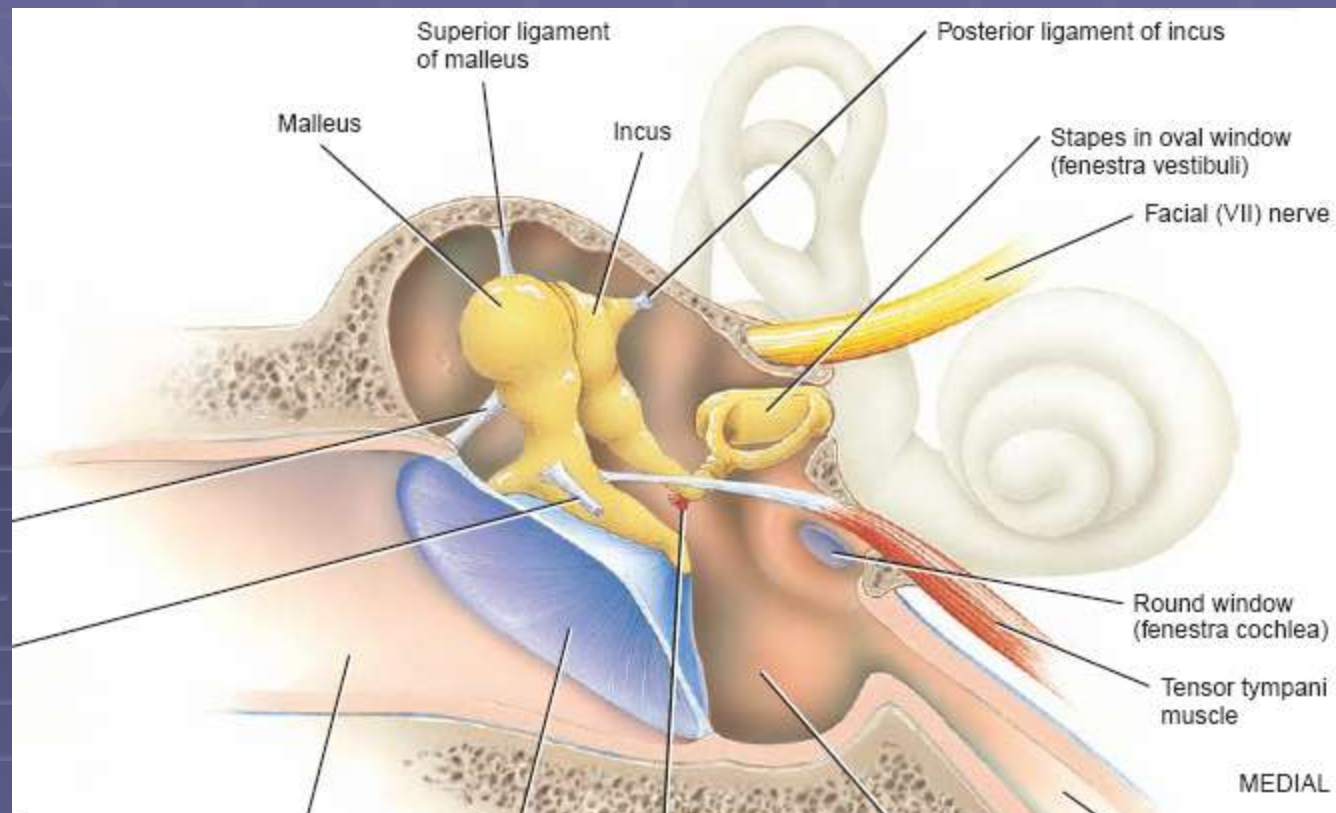


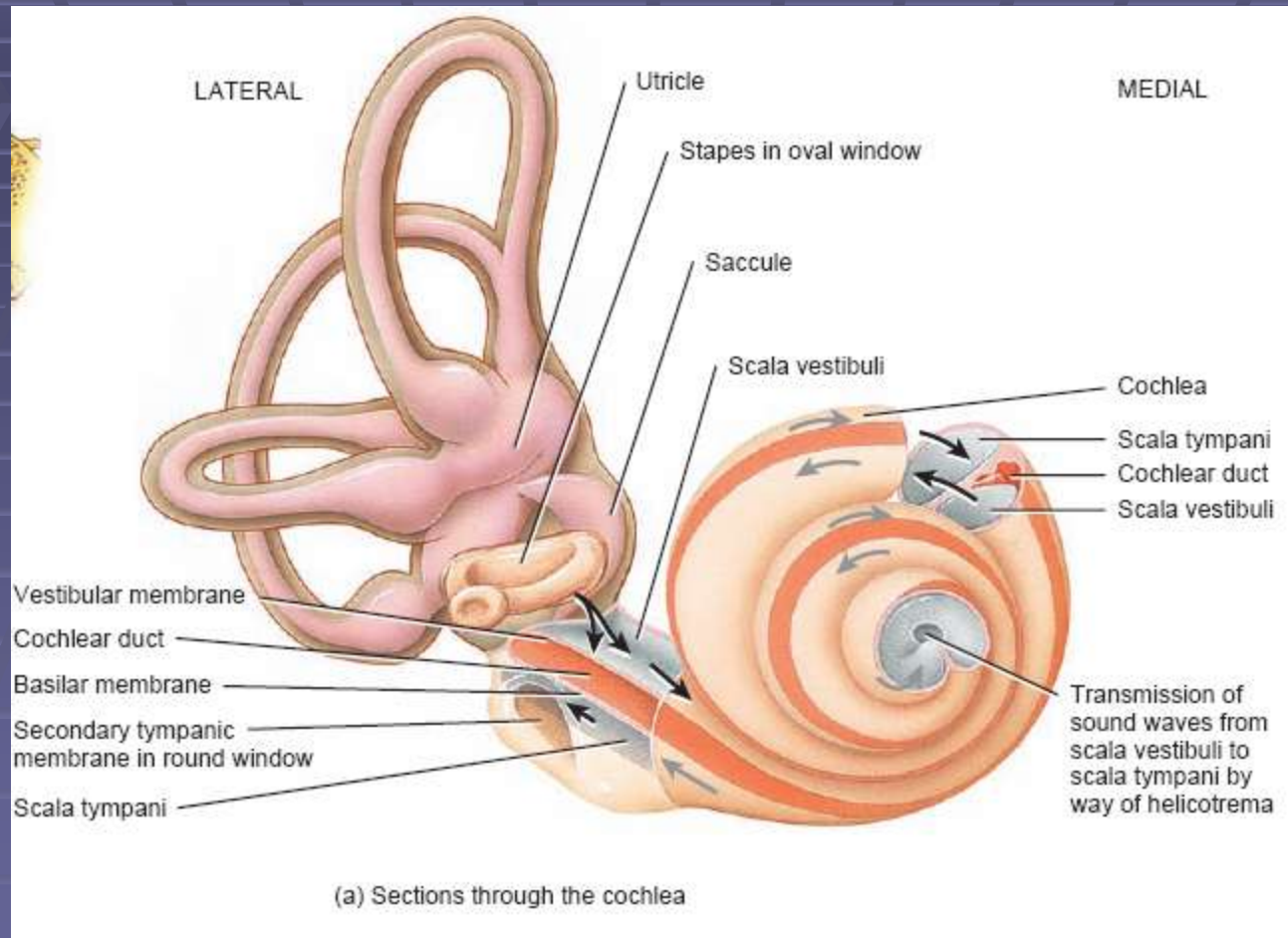
Anatomy of the ear

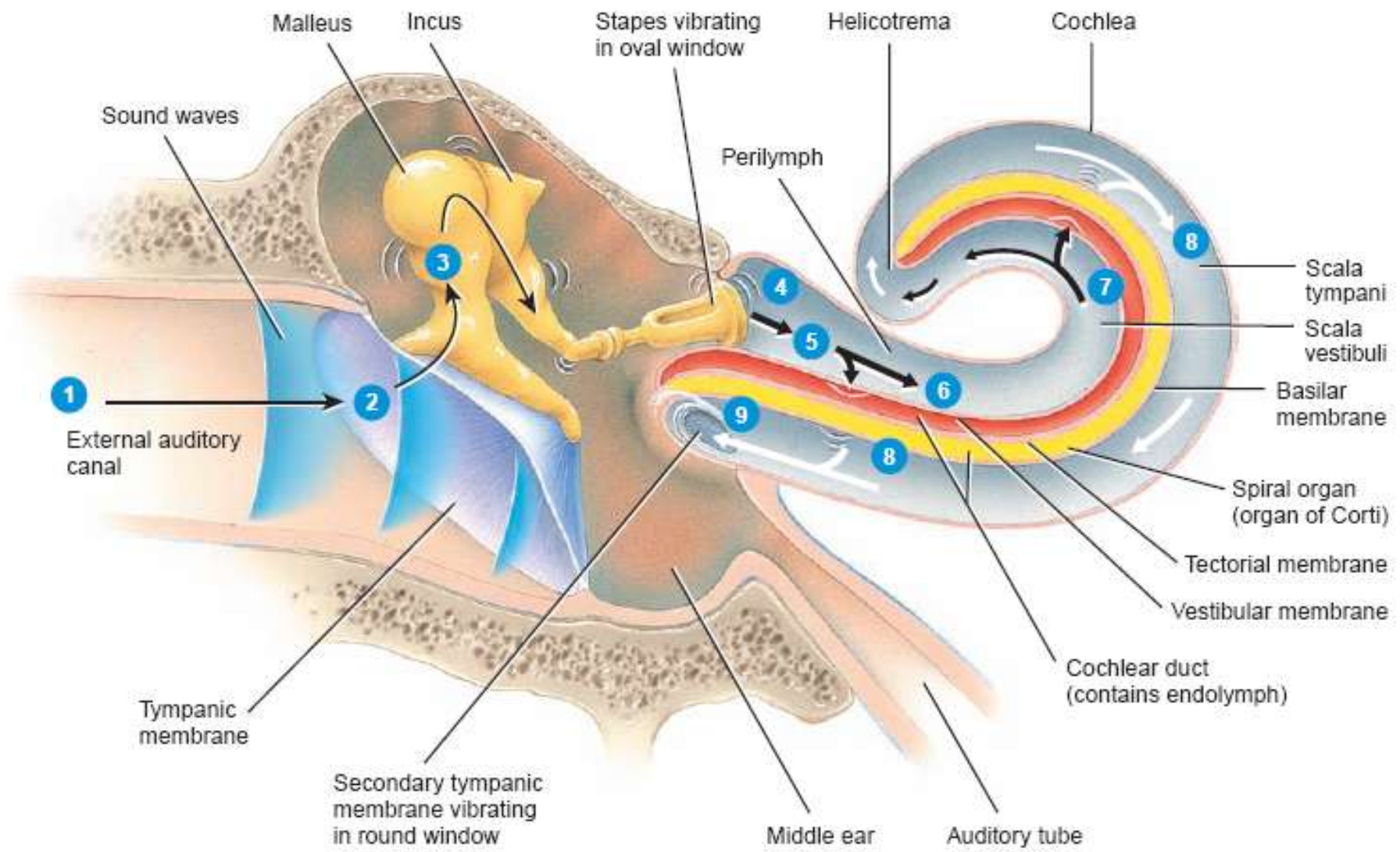


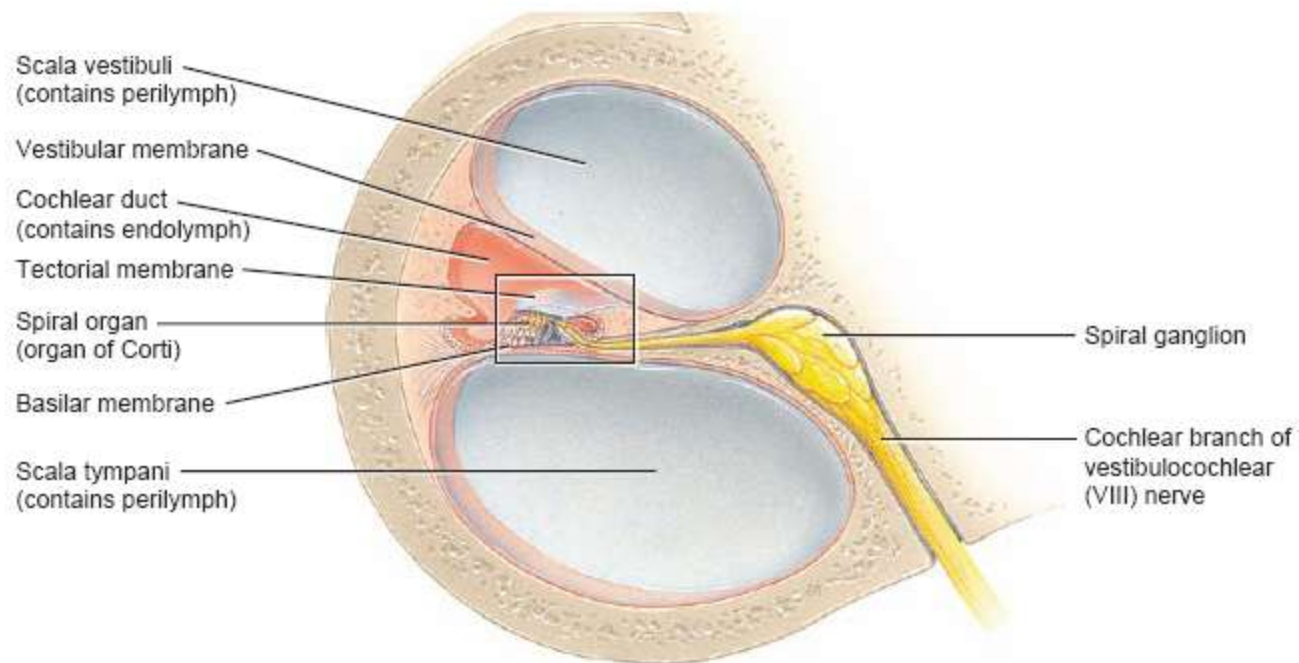
Anatomy of the ear





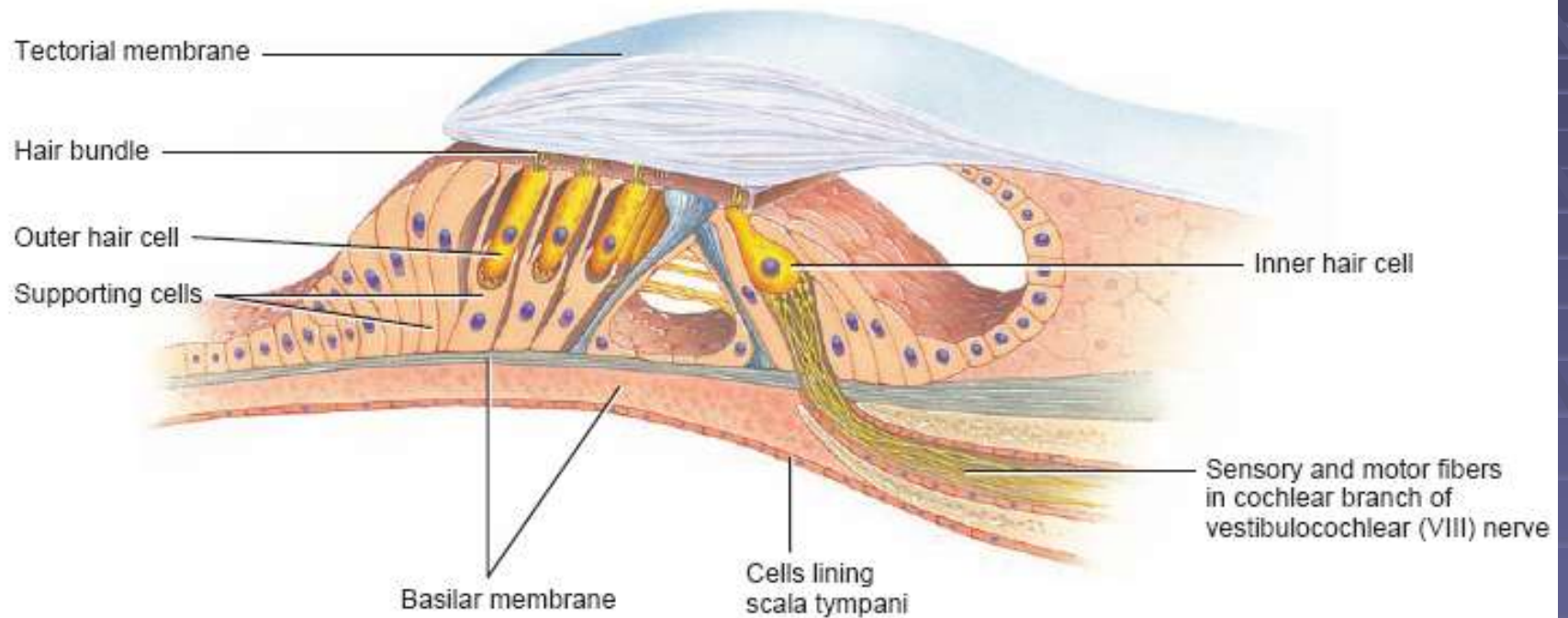




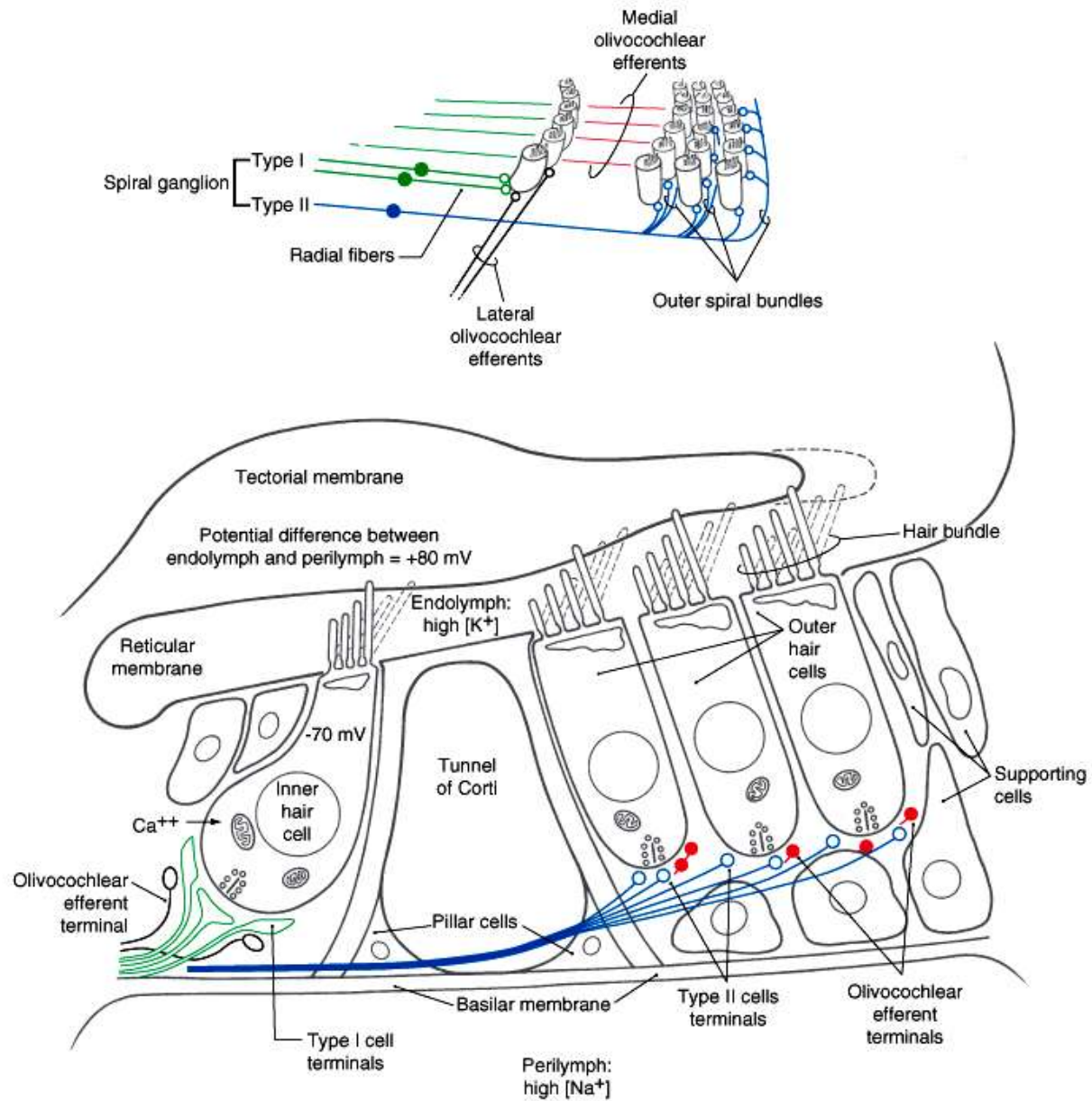


(c) Section through one turn of the cochlea

(c) Section through one turn of the cochlea



(d) Enlargement of spiral organ (organ of Corti)



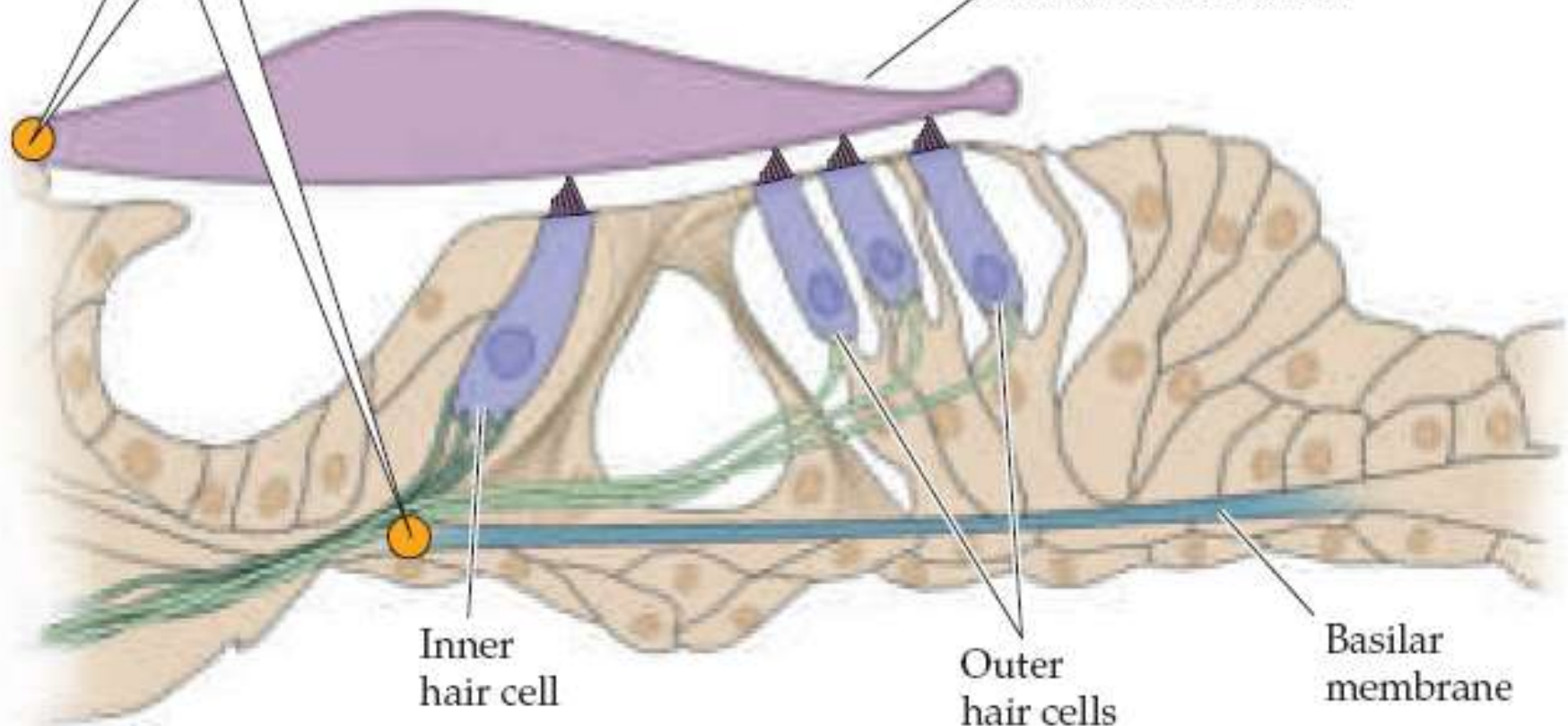
Pivot points for tectorial and basilar membranes are offset

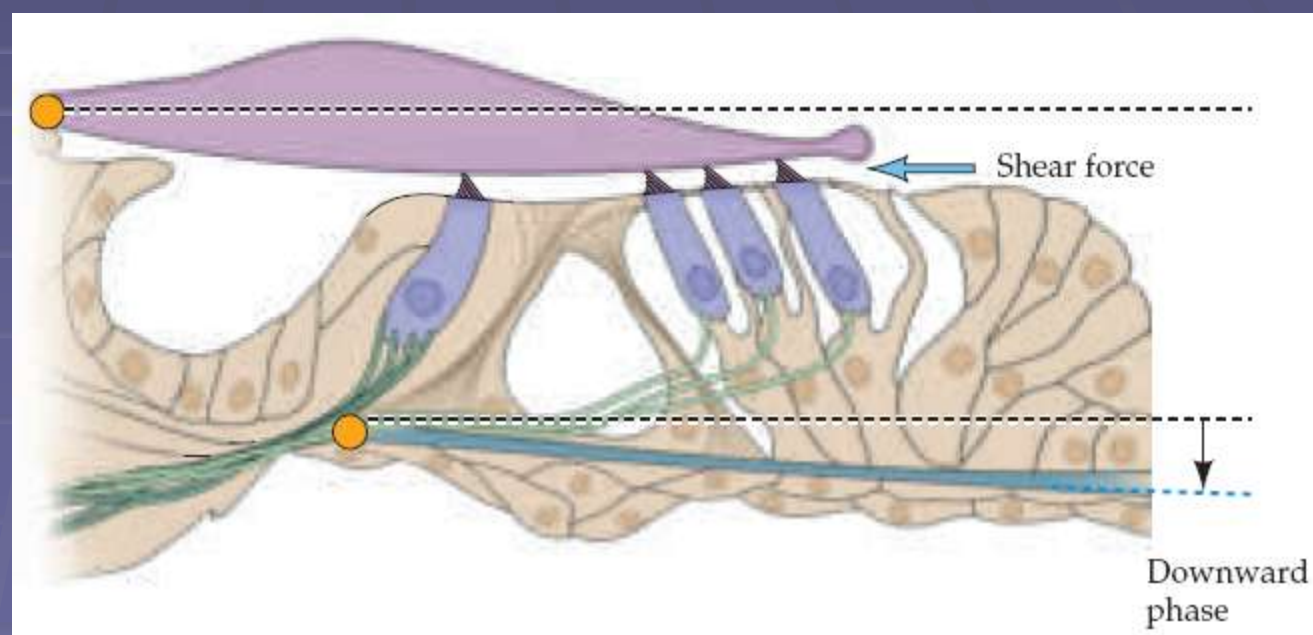
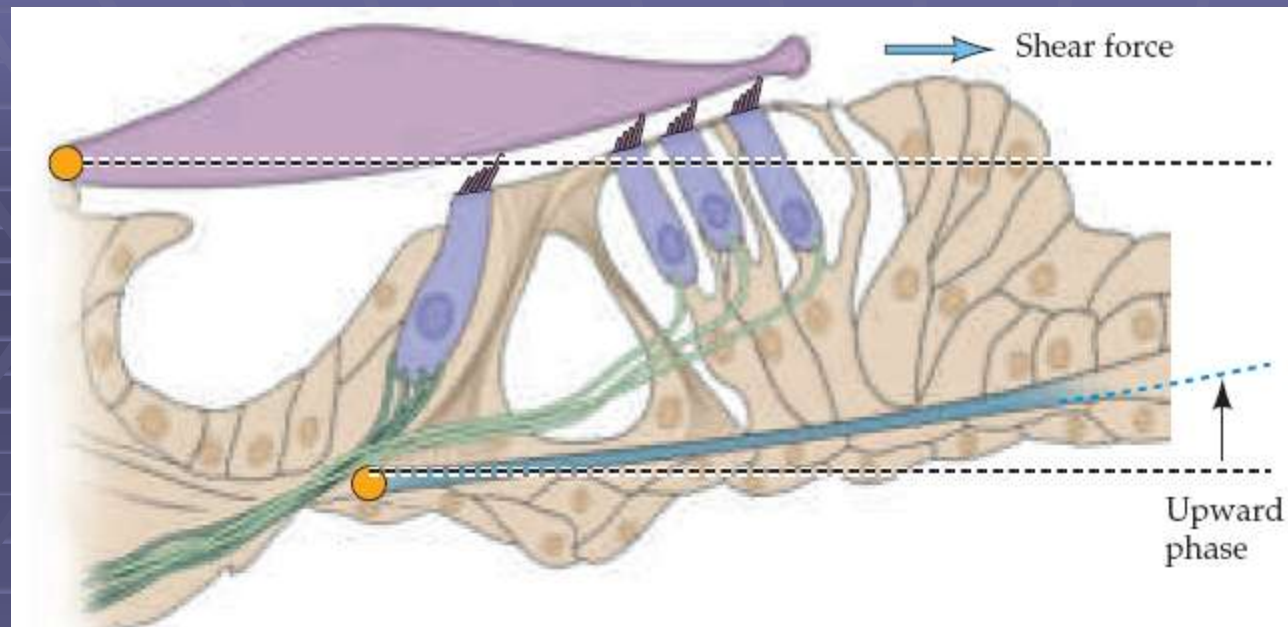
Tectorial membrane

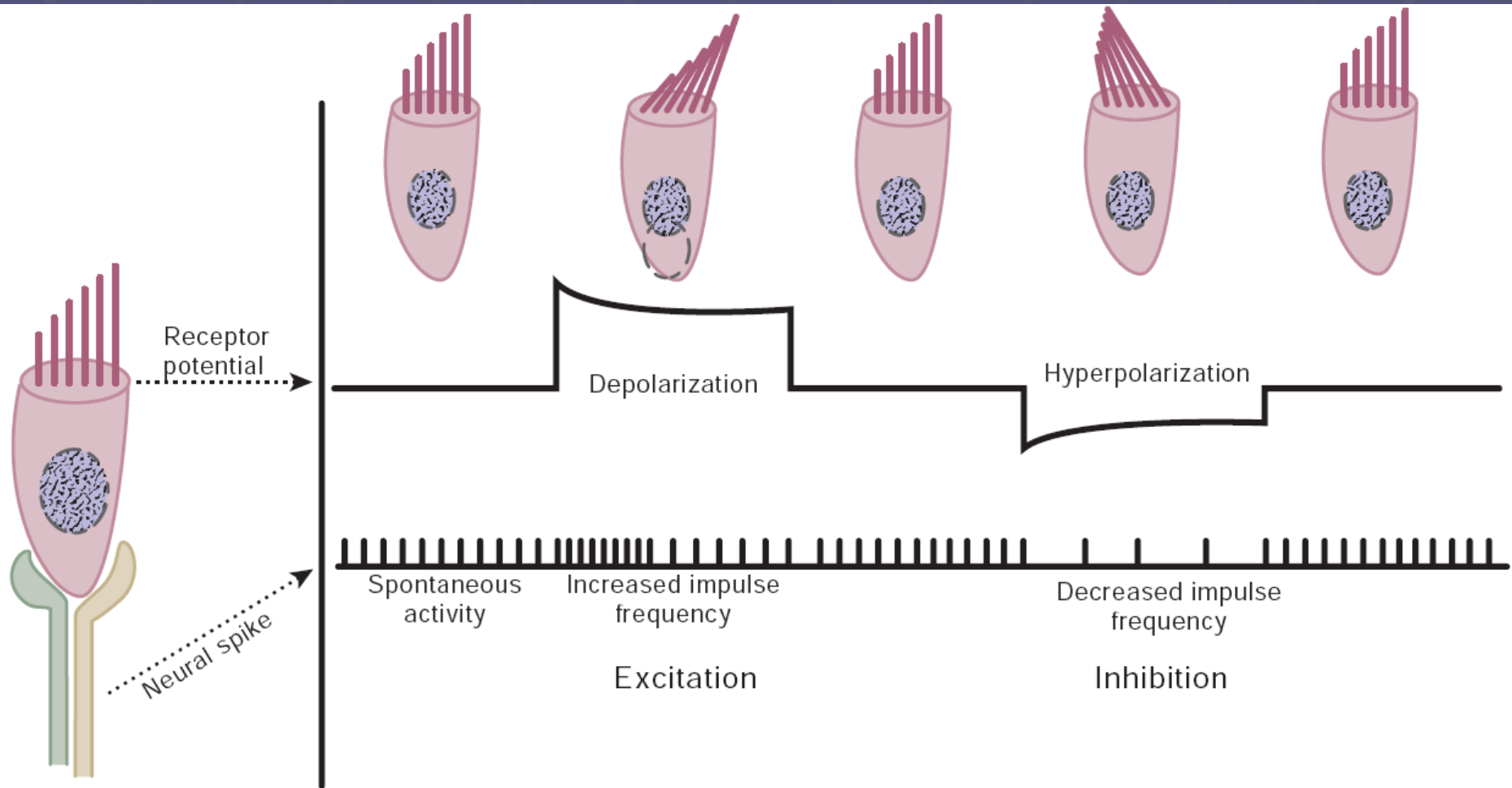
Inner hair cell

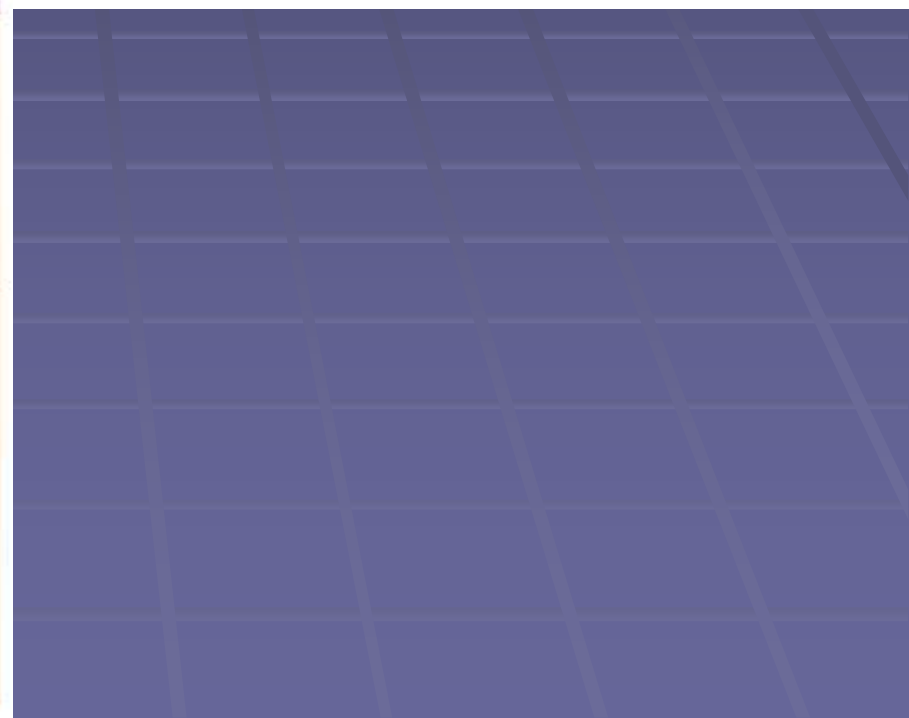
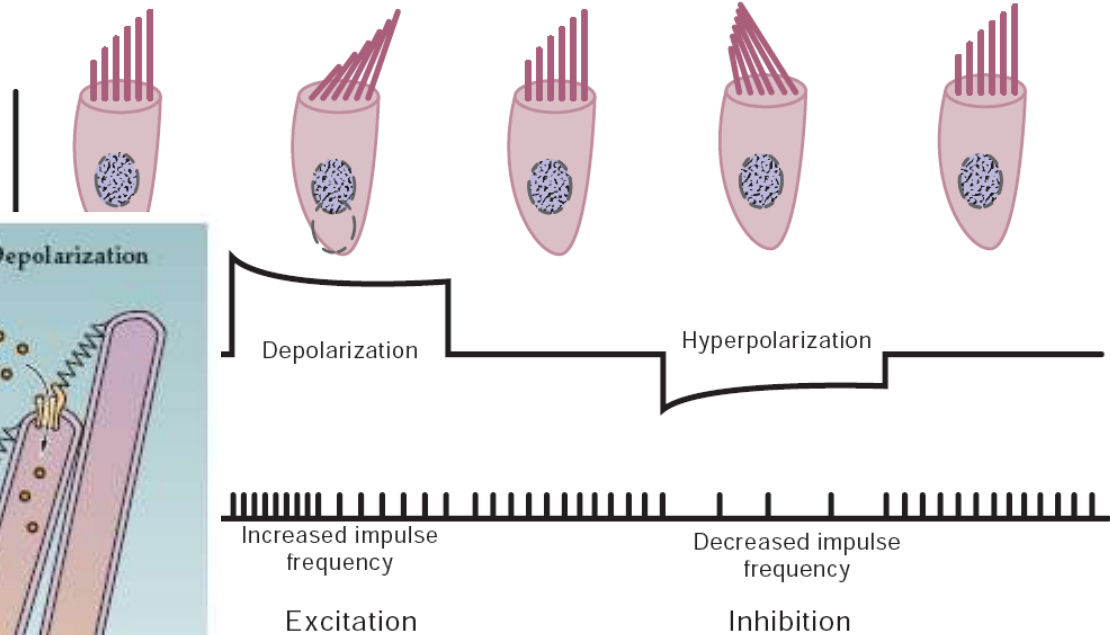
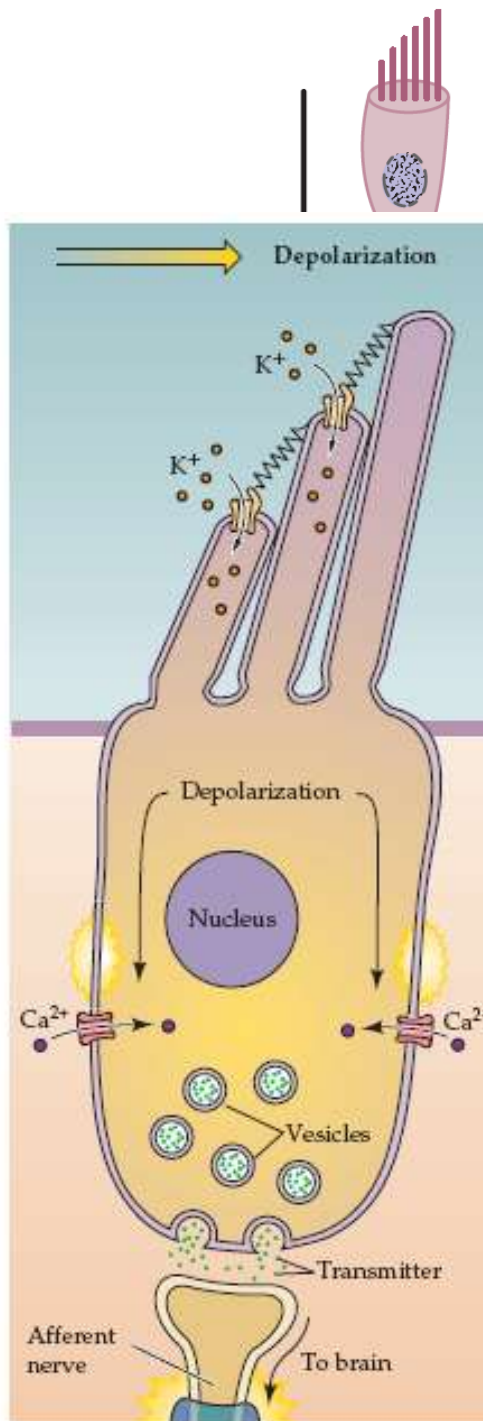
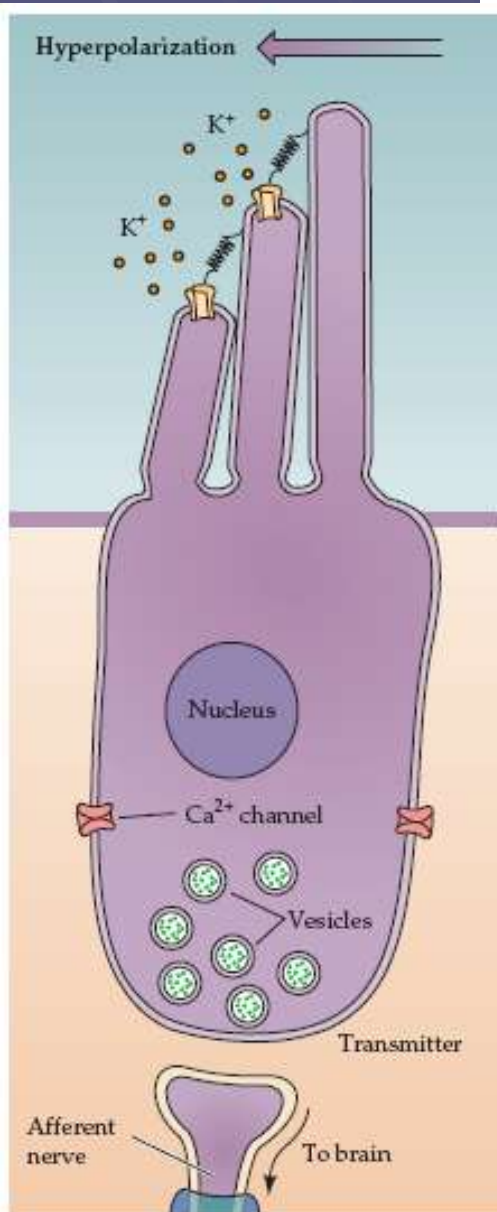
Outer hair cells

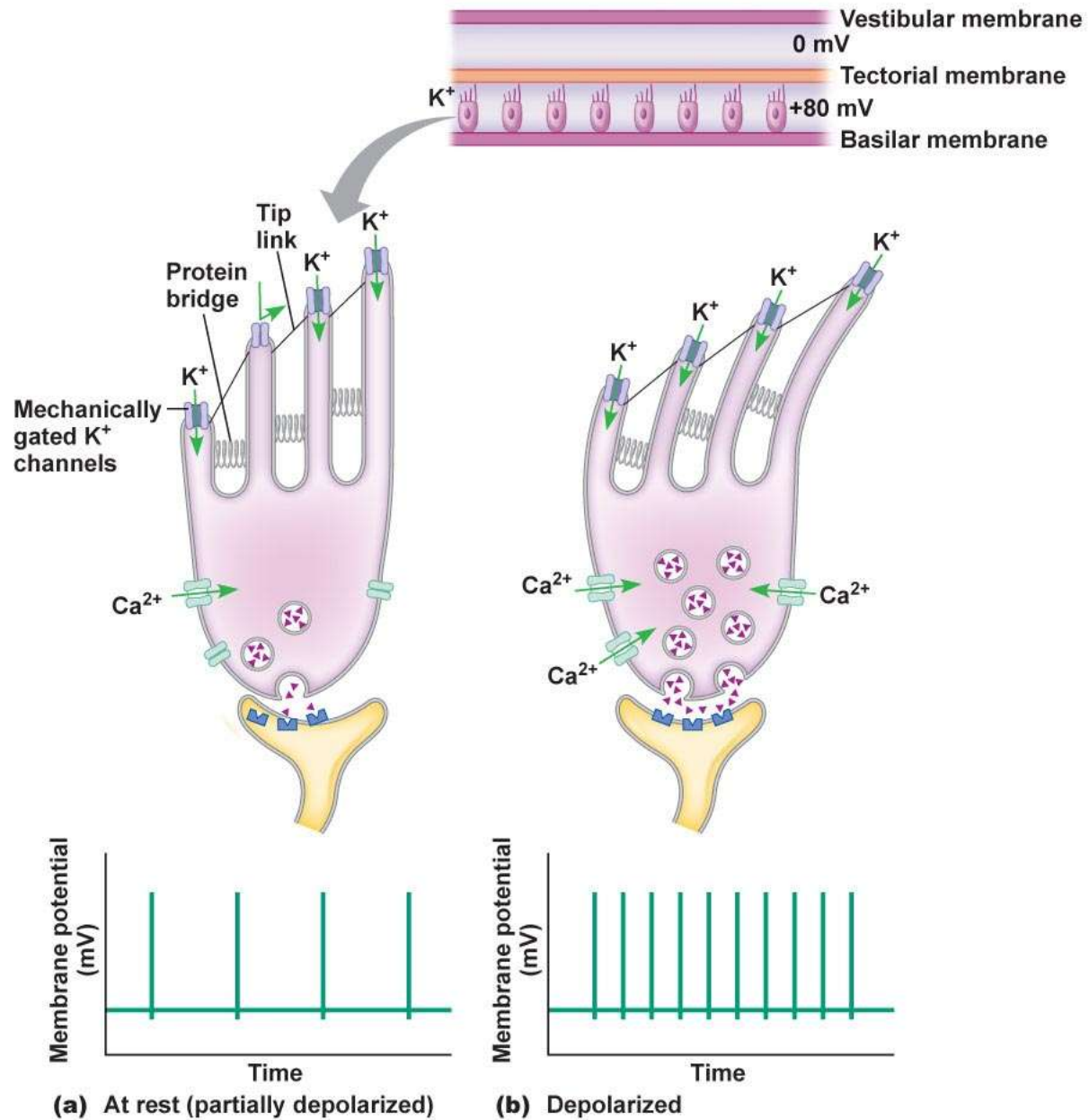
Basilar membrane

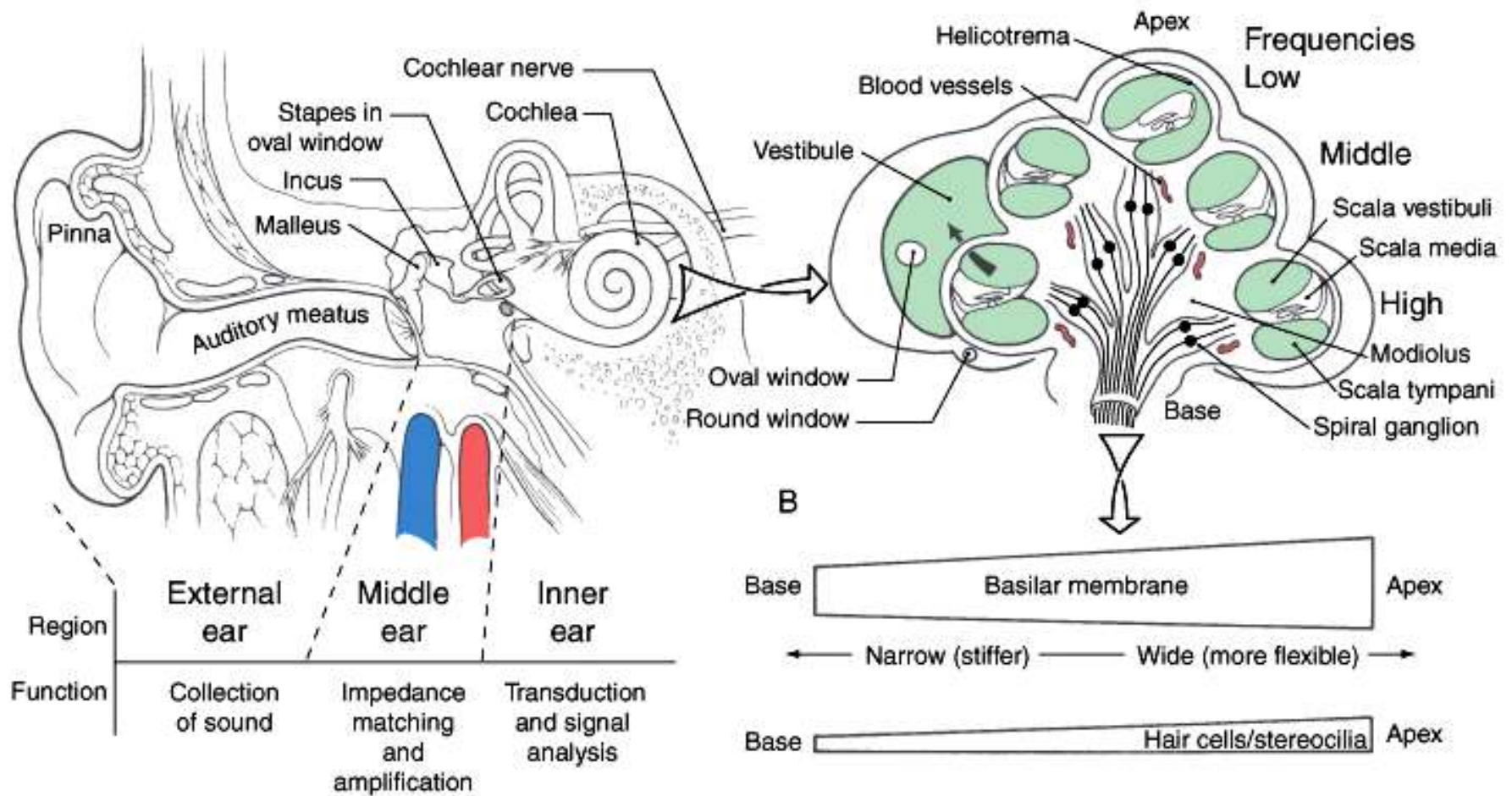




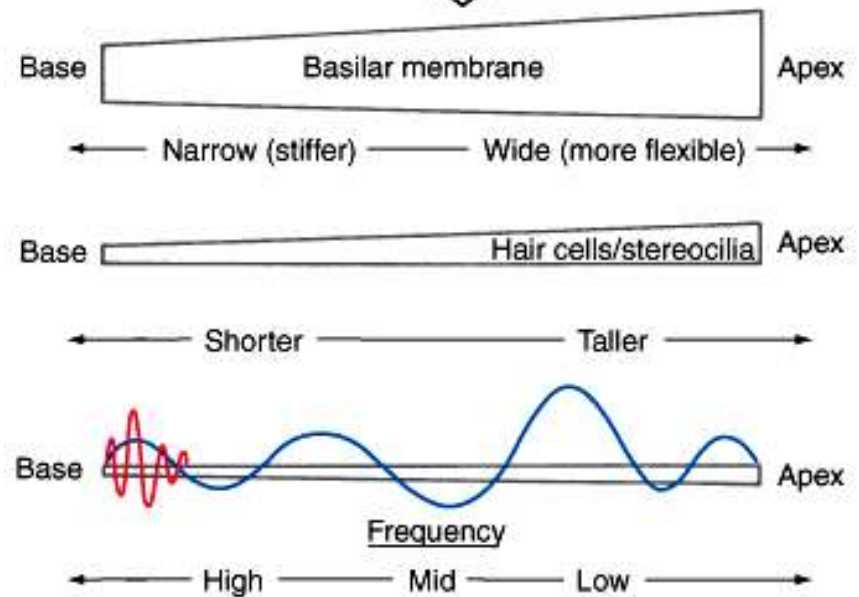




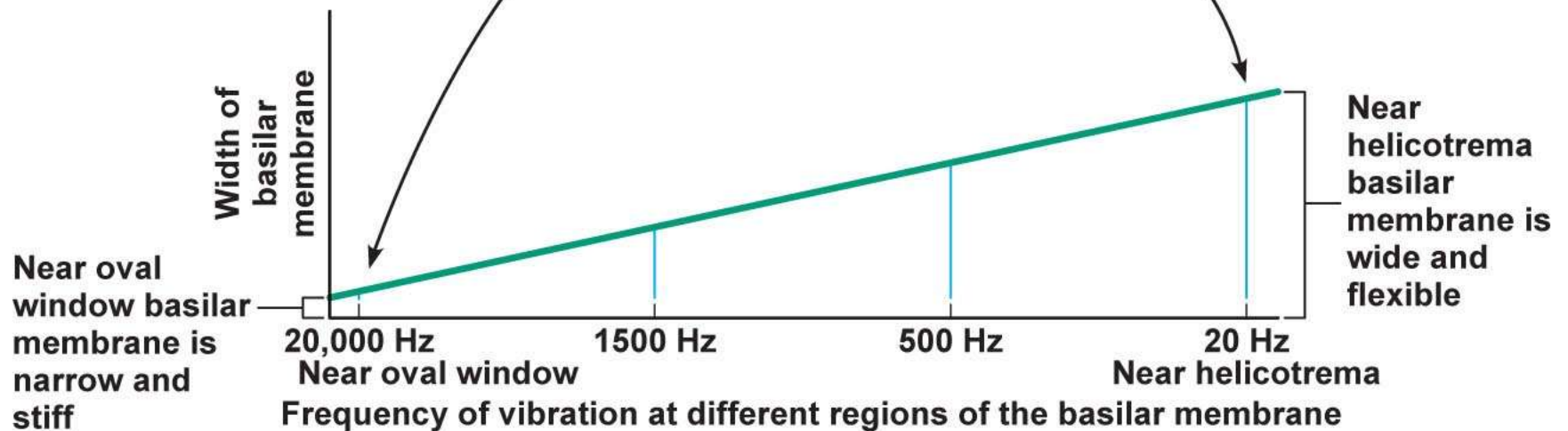
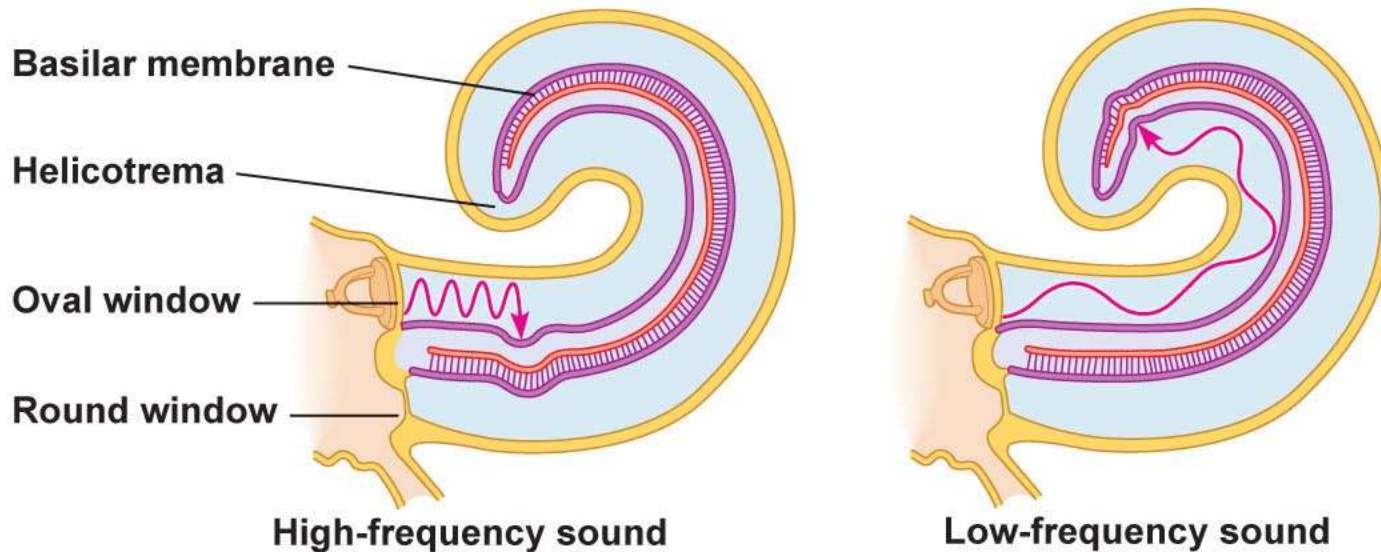


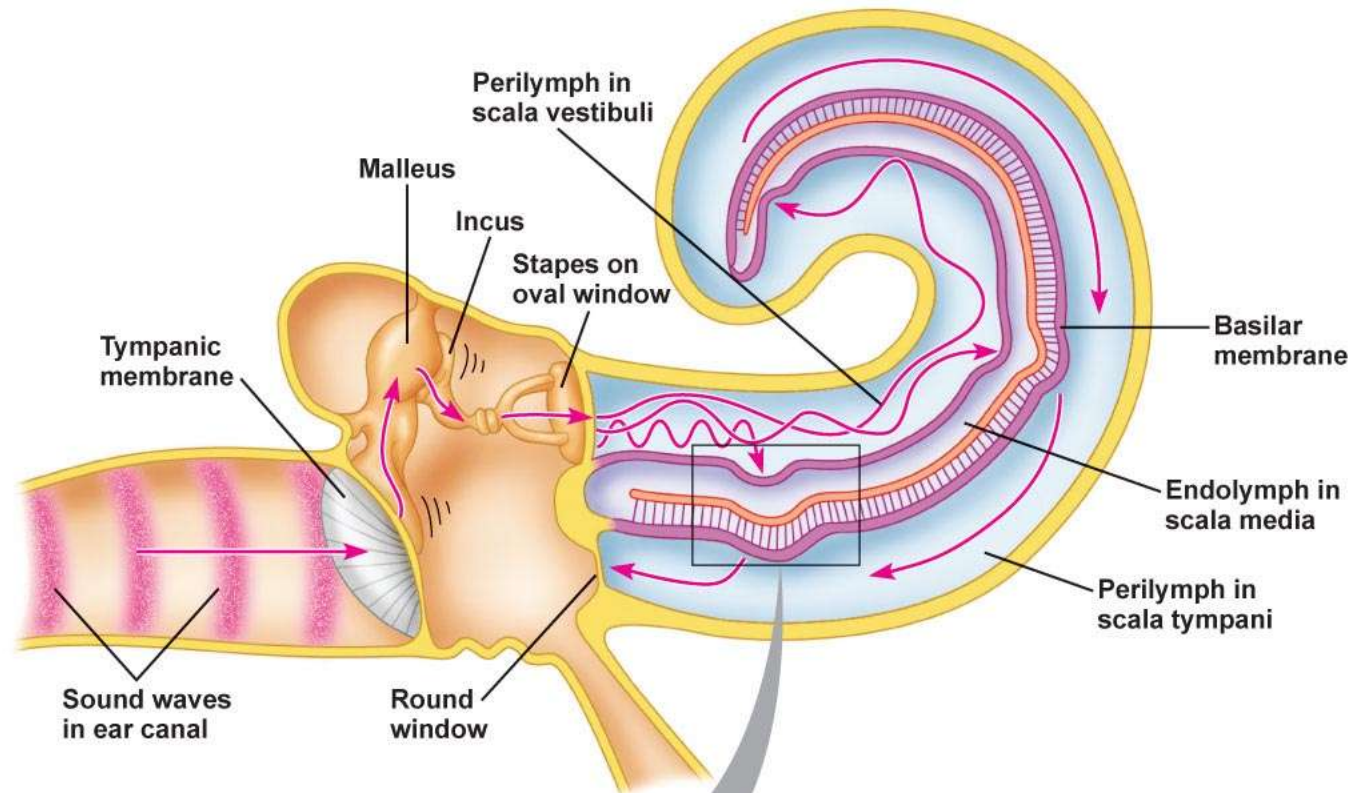


B

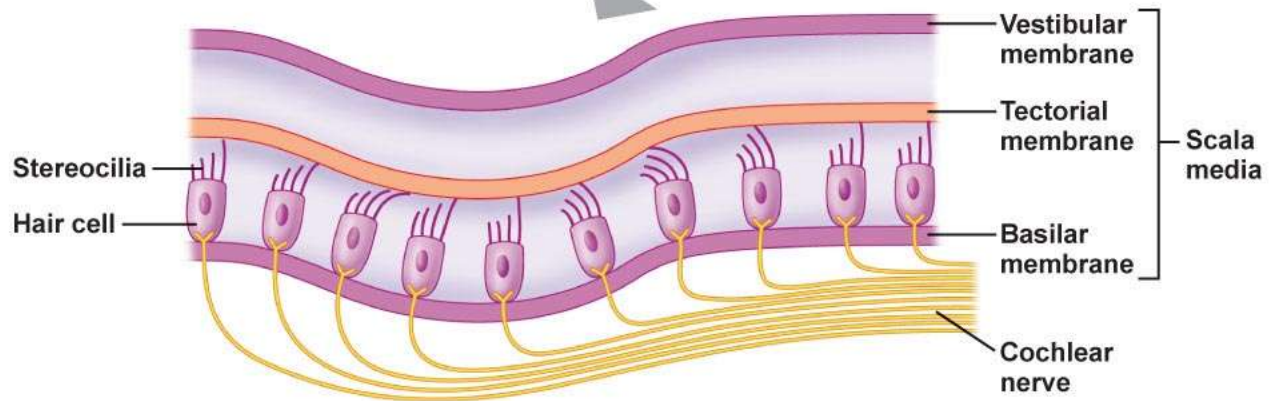


C

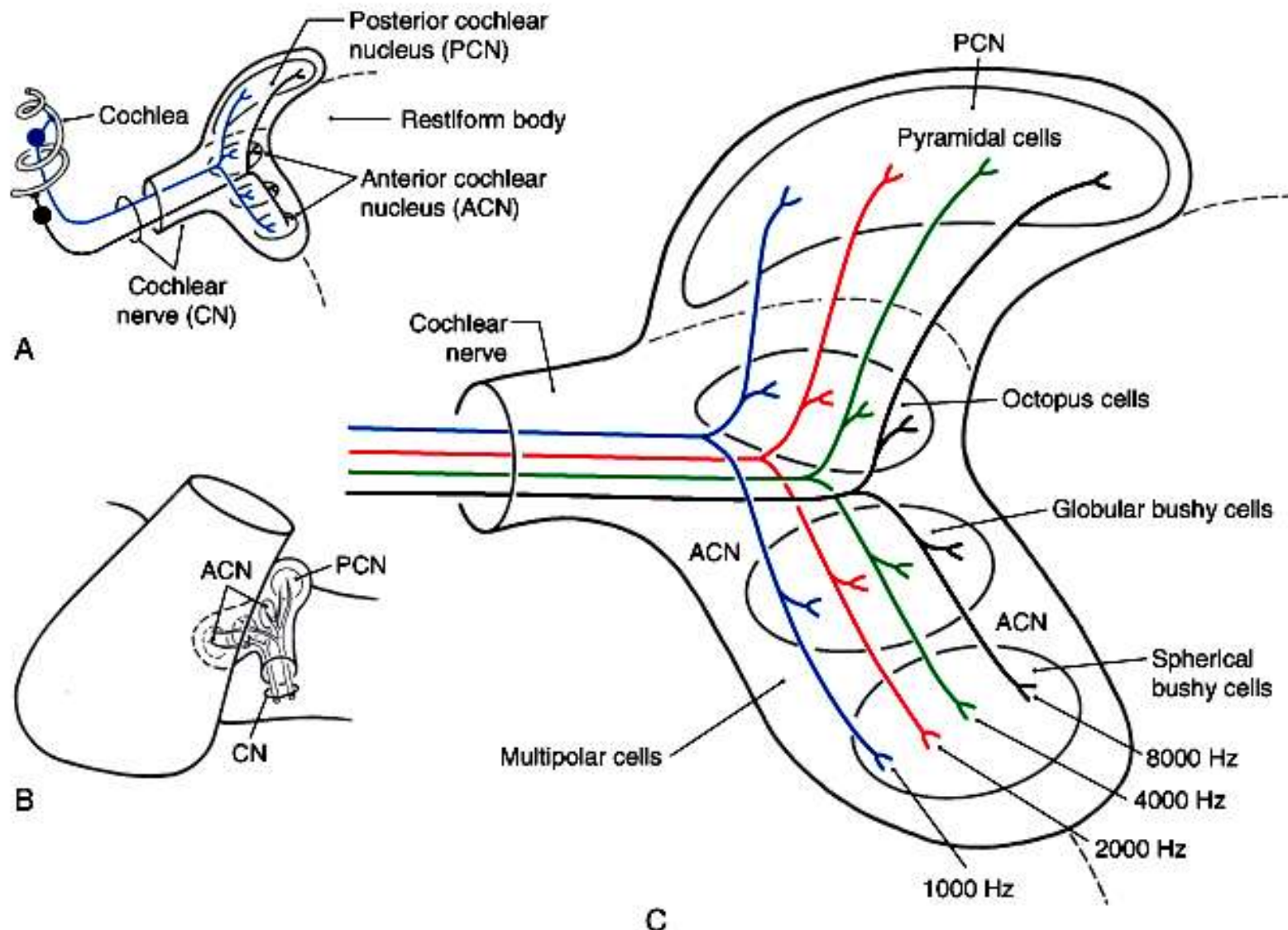




(a)

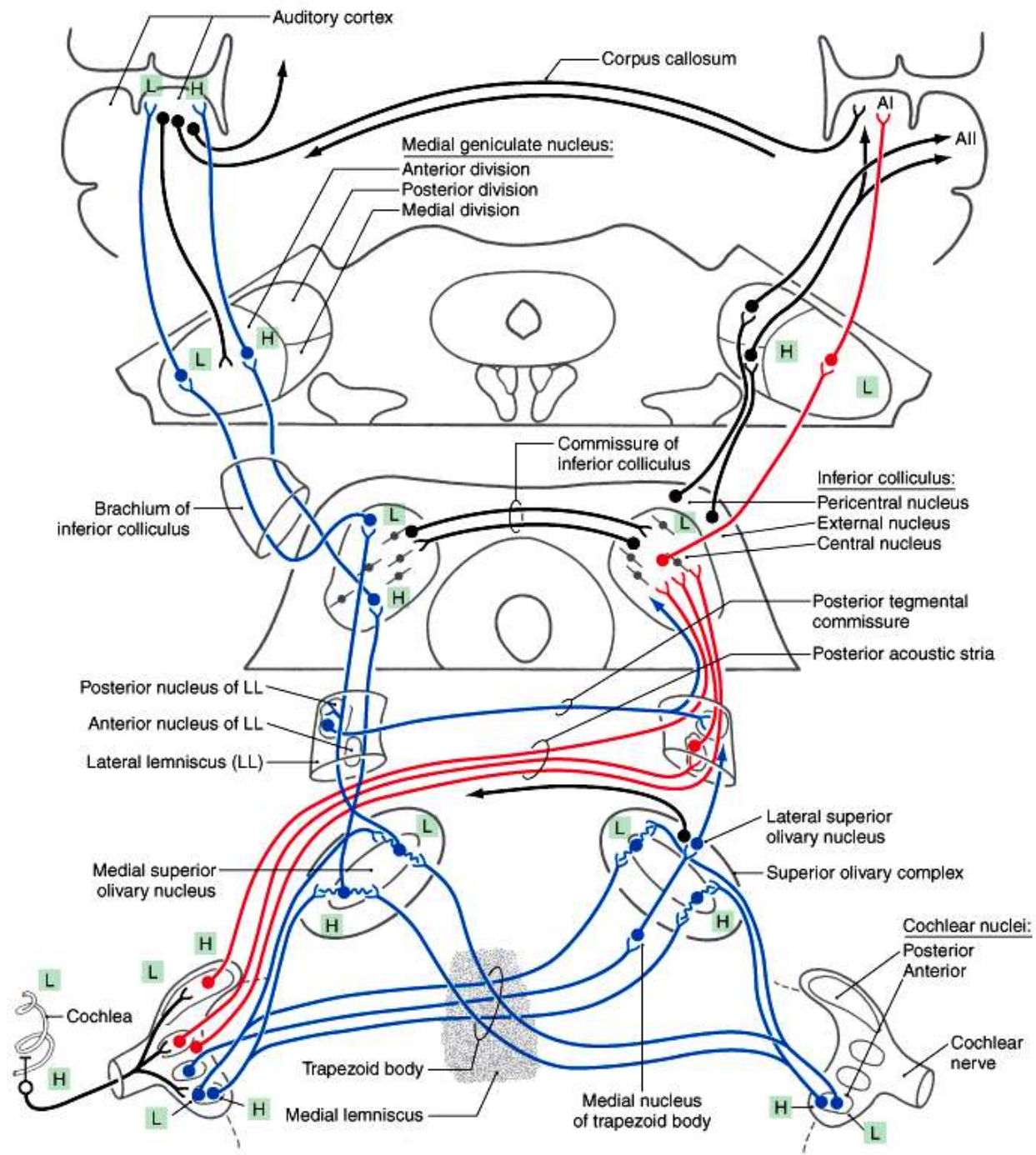


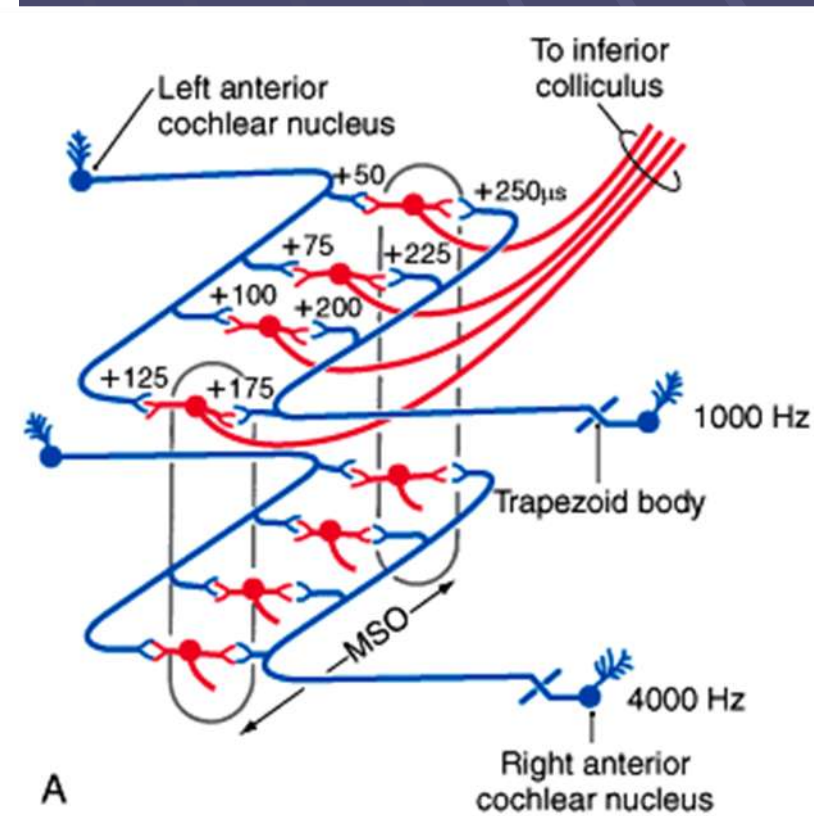
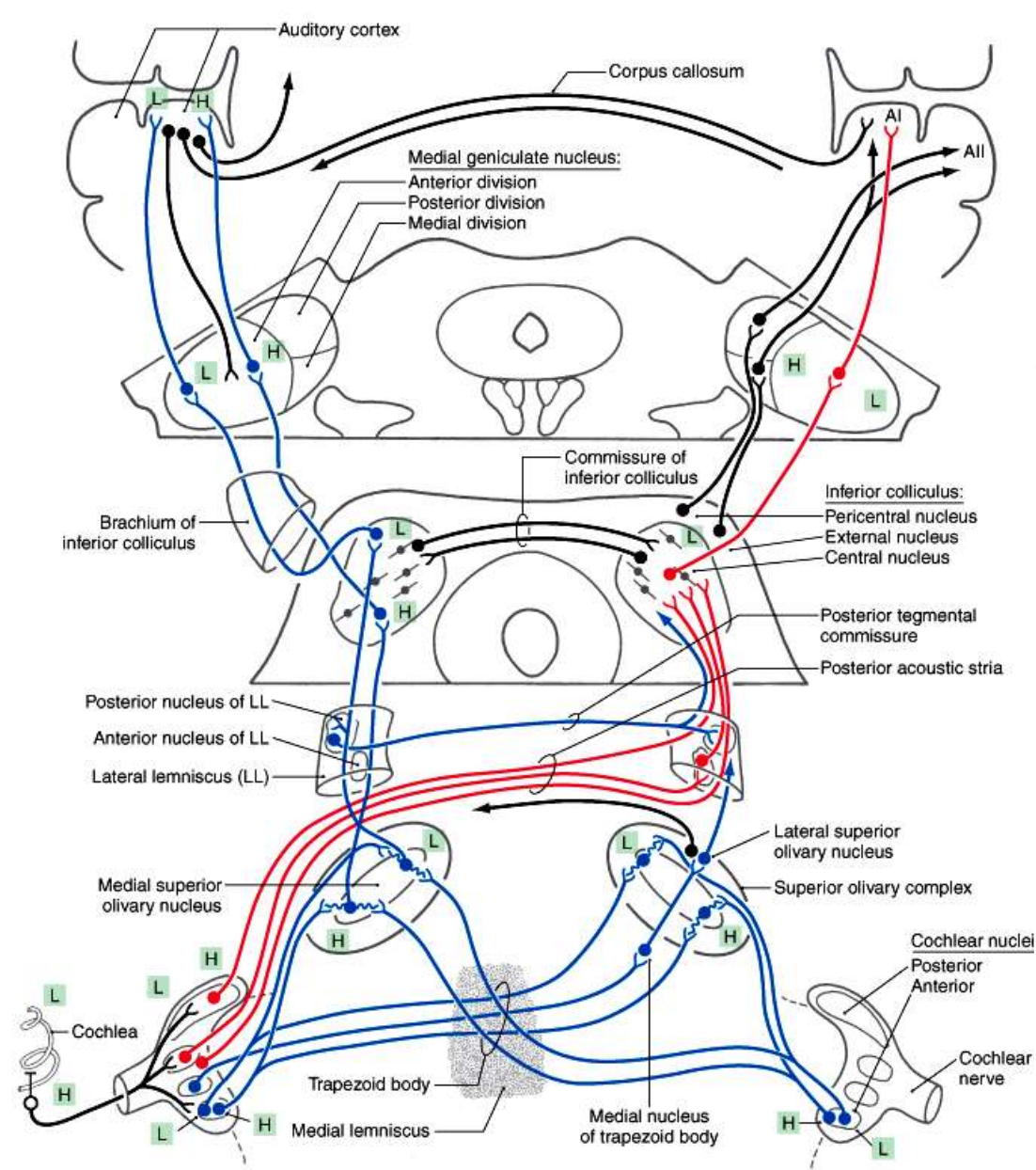
(b)

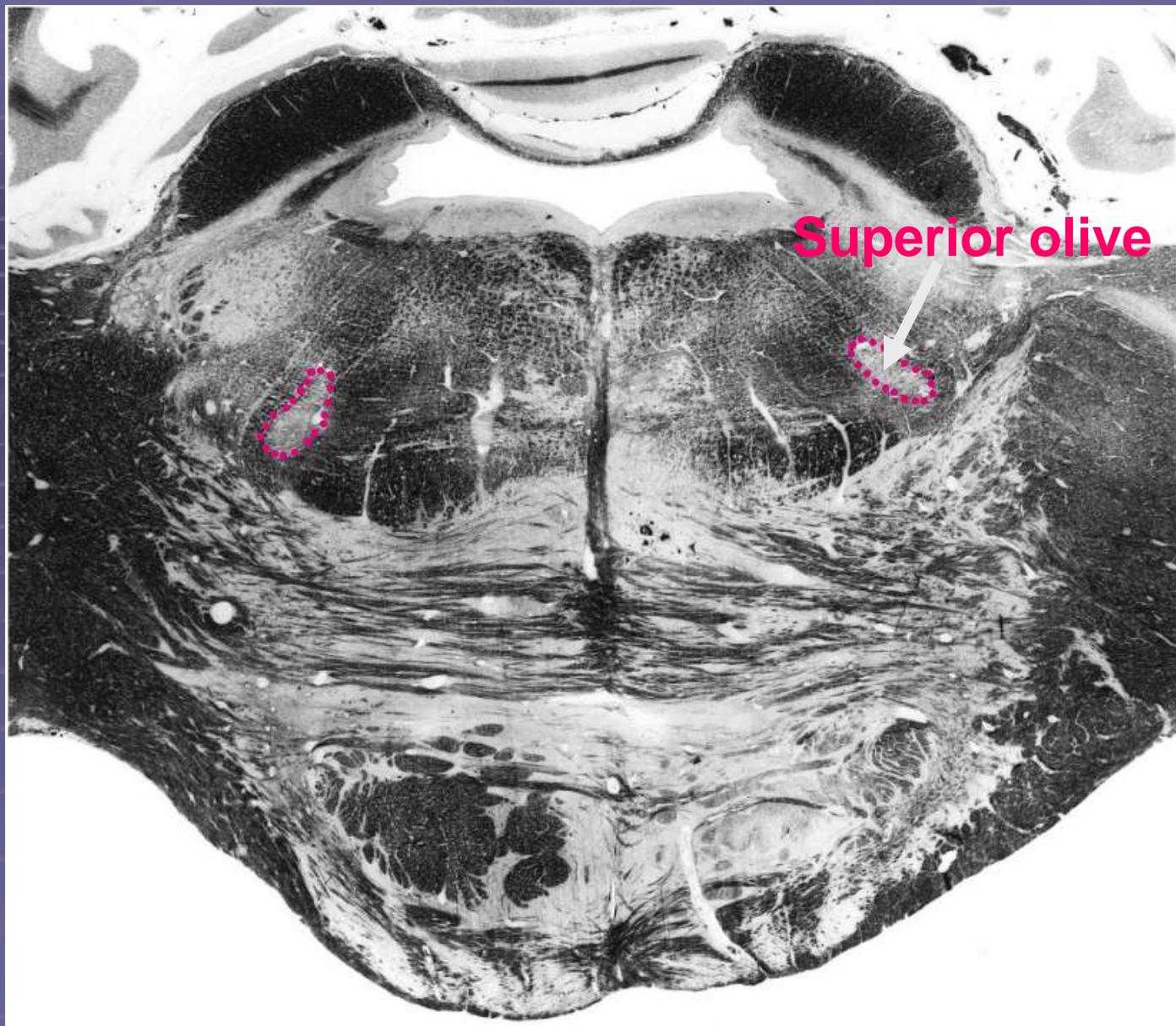


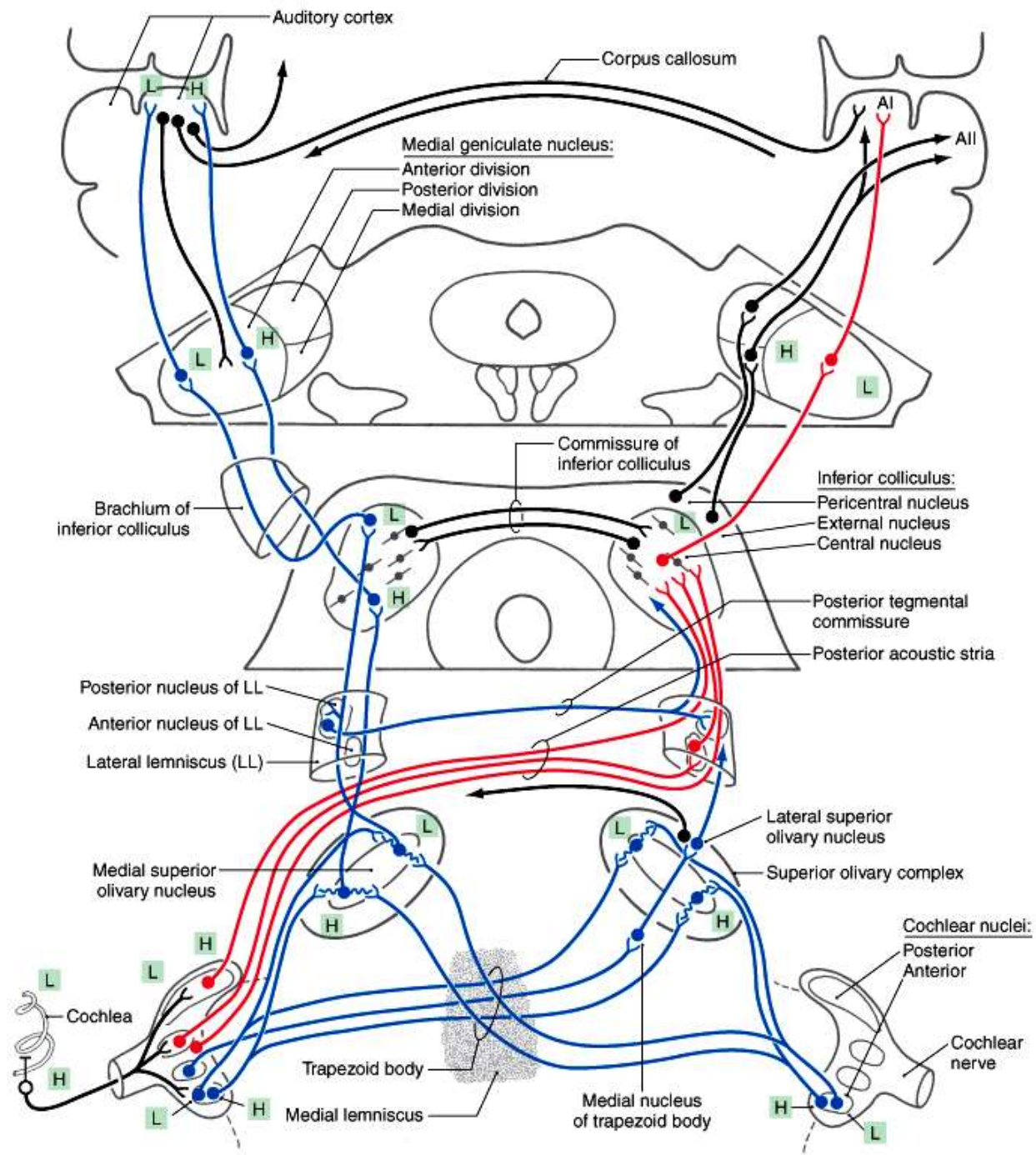


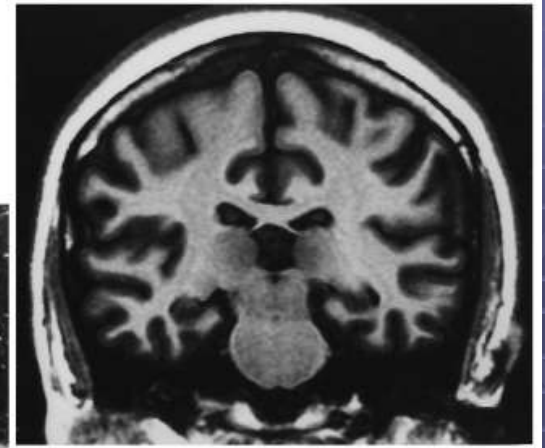
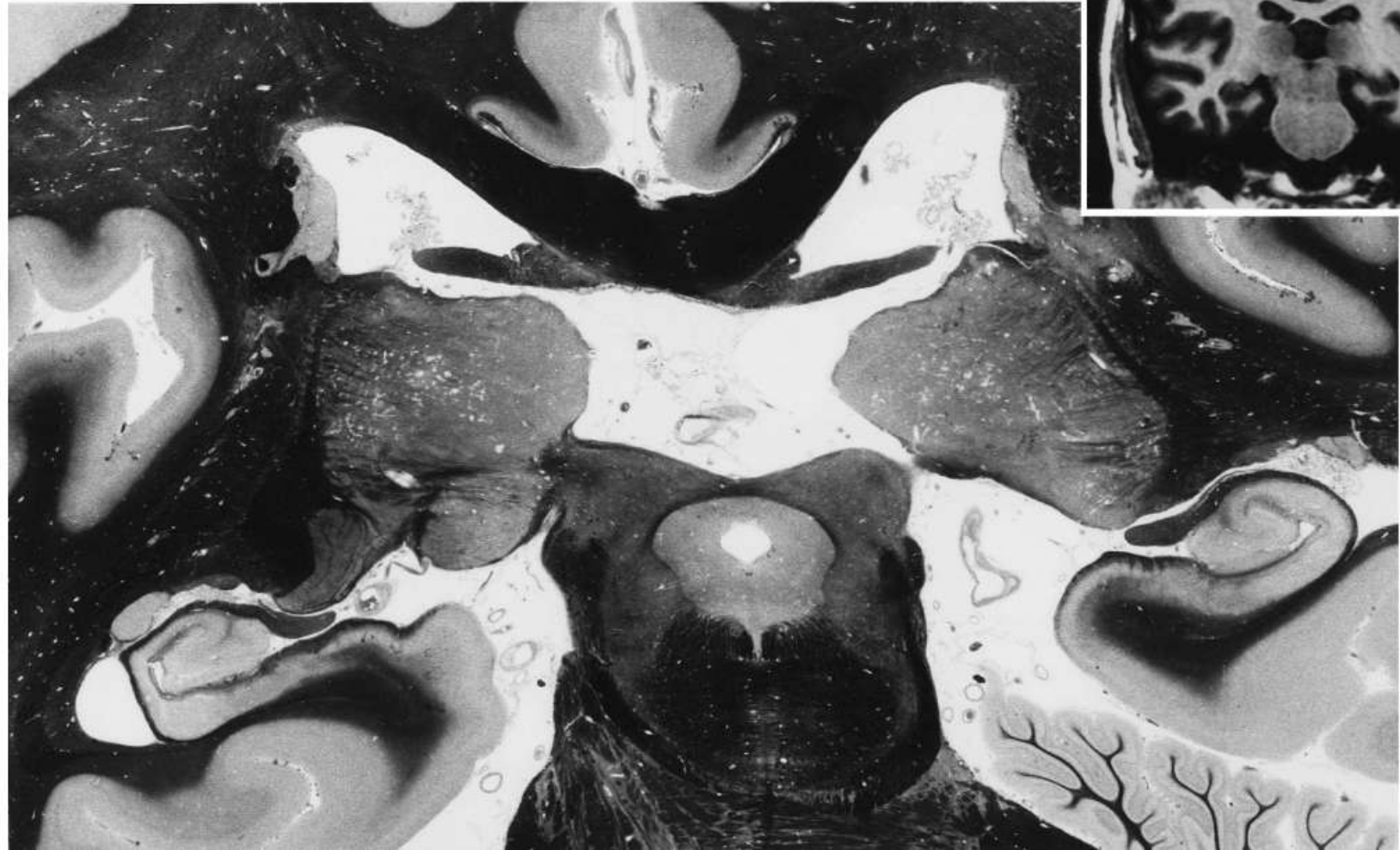


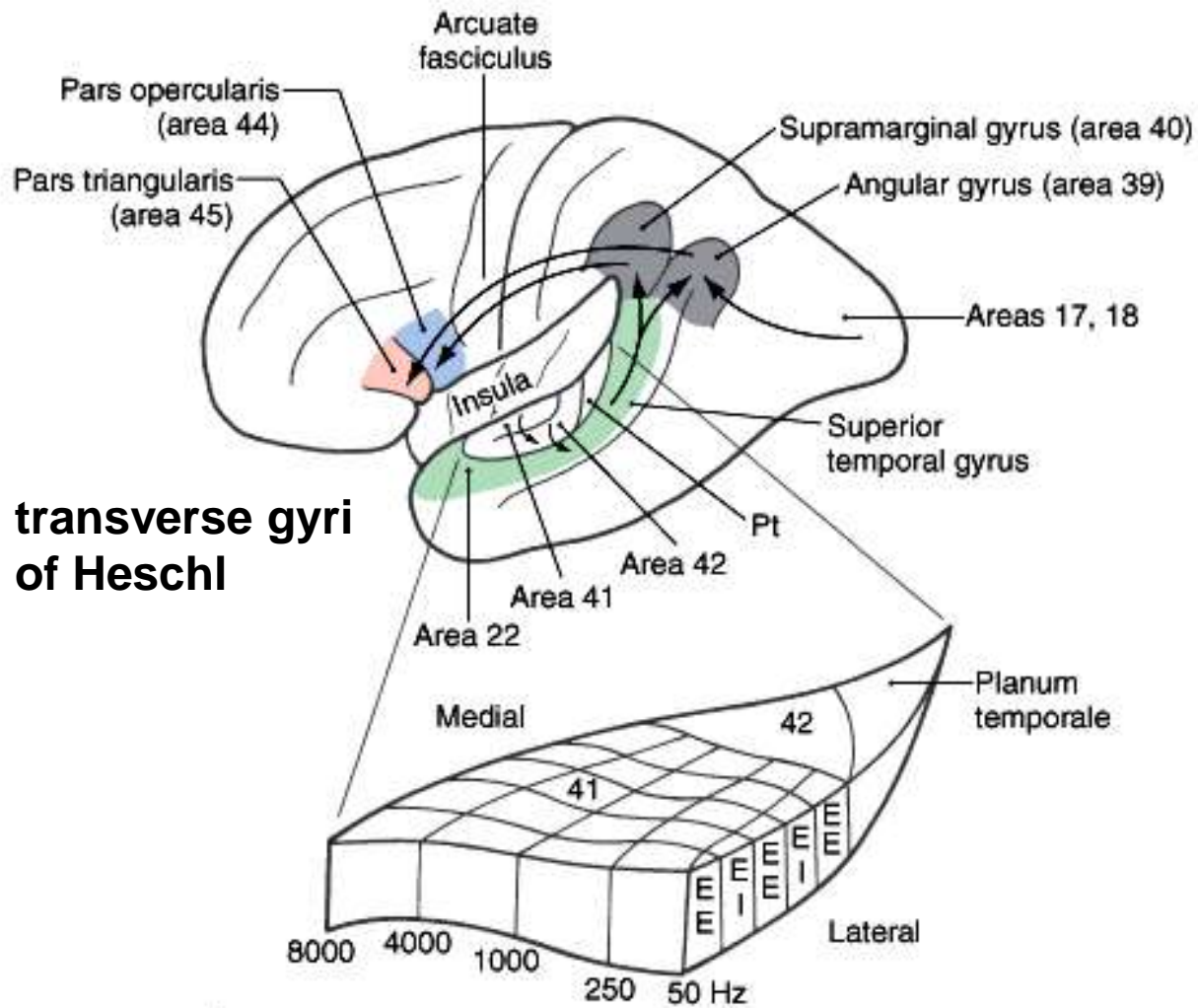




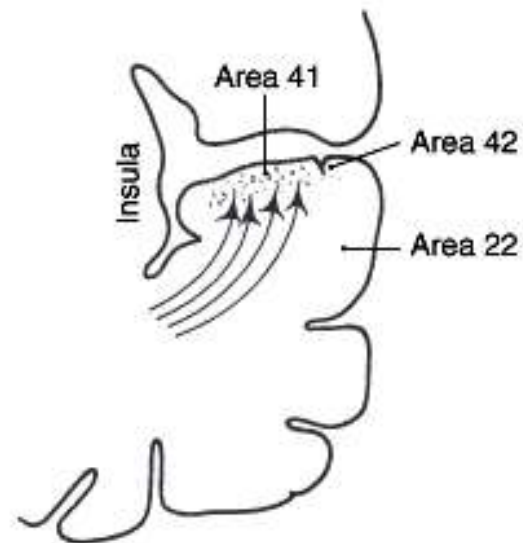




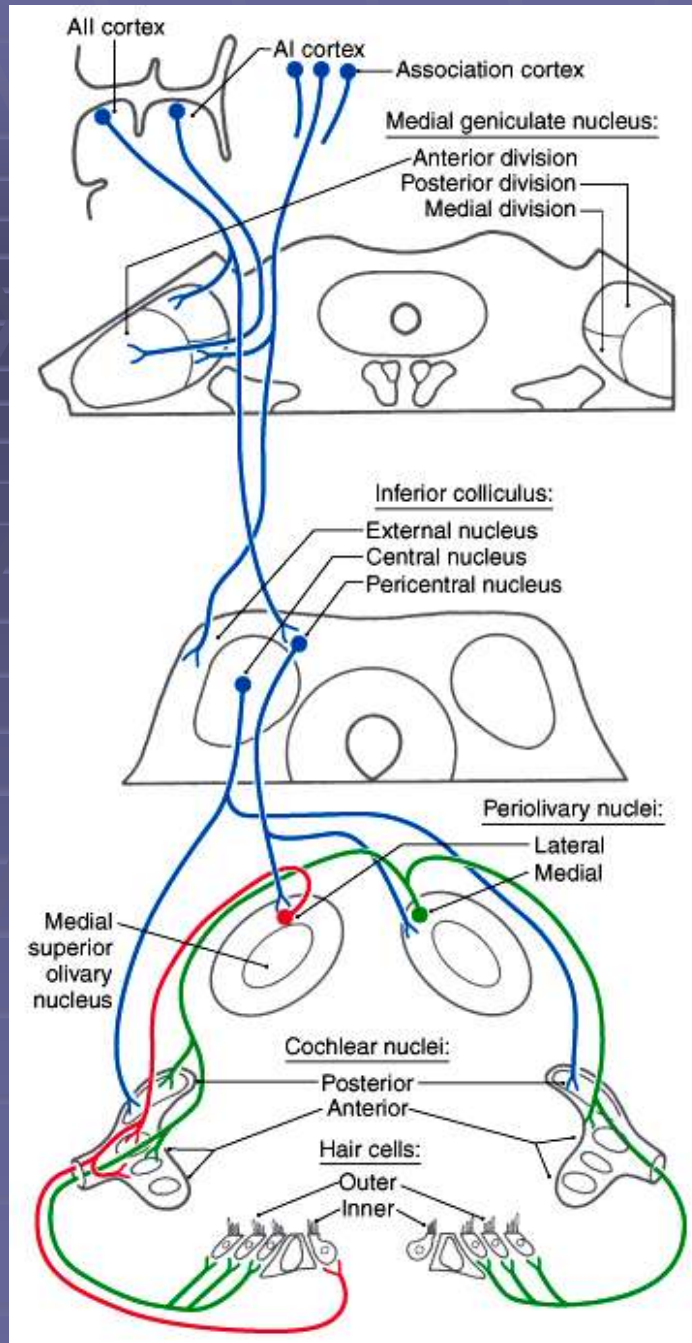




A



B



Olivocochlear descending feedback loop

