

## "Hearing & Balance: Crash Course A&P #17":

1. Sounds create vibrations in the air which beat against the \_\_\_\_\_ which pushes a series of tiny bones that move internal fluid against a membrane that triggers tiny hair cells (which aren't actually hairs) that stimulate neurons which in turn send \_\_\_\_\_ to the brain that interprets them as sound.
2. The key to sound is \_\_\_\_\_.
3. A sound's \_\_\_\_\_ is the number of waves that pass a given point in a given time. A high pitched sound has a **LOWER** **HIGHER** frequency than a lower pitched sound.
4. How loud a sound registers depends on its \_\_\_\_\_: the difference between the high and low pressure created in the air by that sound wave.
5. The external and middle ear are only involved in \_\_\_\_\_ while the middle ear is involved in hearing and maintaining equilibrium.
6. The **tympanic membrane** is better known as the \_\_\_\_\_. When sound waves collide with this membrane they cause it to vibrate. Behind that, the **tympanic cavity** focuses the \_\_\_\_\_ of sound waves so that they are strong enough to move the fluid in the inner ear. It does this using the smallest three bones in the human body: the \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. Since this section of your ear has come of the most complicated anatomy in the body, it's commonly referred to as the **labyrinth**.
7. The labyrinth has two very important functions:
  1. Turn those physical vibrations into \_\_\_\_\_ impulses the brain can identify as sounds.
  2. Help maintain your \_\_\_\_\_ (balance).
8. The hearing part of the labyrinth is the snail-shaped \_\_\_\_\_.
9. Nothing gets heard until something tells the \_\_\_\_\_ what's going on. It can detect the pitch of a sound based solely on the \_\_\_\_\_ of the hair cells being triggered.
10. The **vestibular apparatus** in the labyrinth helps us maintain our \_\_\_\_\_.
11. The brain can use the location of the triggered hair cells in the vestibular apparatus to determine in which \_\_\_\_\_ my head is moving as well as how \_\_\_\_\_ it's moving.
12. \_\_\_\_\_ results from a sensory conflict between sensory receptors.