Spotlight On Health

Learning About Ears!

Ears come in all shapes and sizes! People have them and so do many animals! Did you hear something? Maybe the sound you heard was as quiet as your dog breathing or maybe it was loud like a siren.

Ears are in charge of collecting sounds, processing them, and sending sound signals to your brain. And that's not all - your ears also help you keep your balance.

The ear is made up of three different sections - The Outer Ear - The Middle Ear - The Inner Ear - and they all work together so you can hear!

The Outer Ear:

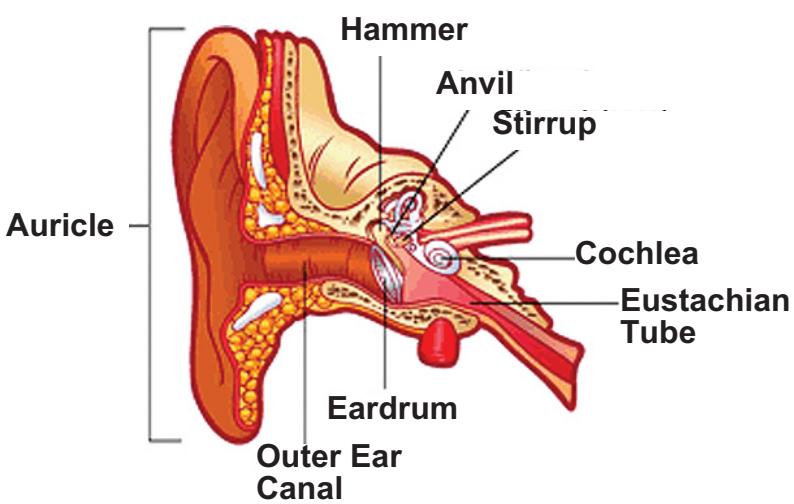
The outer ear is called the auricle (or-ih-kul). This is the part of the ear that people can see. The main job of the outer ear is to collect sounds.

The outer ear also includes the ear canal, where wax is produced. Earwax is that gross stuff that protects the canal. Earwax contains chemicals that fight off infections that could hurt the skin inside the ear canal. It also collects dirt to help keep the ear canal clean. So that gross stuff is really useful!

The Middle Ear:

When sound waves enter the outer ear, they travel through the ear canal to the middle ear. The middle ear's main job is to take those sound waves and turn them into vibrations that are delivered to the inner ear. To do this, it needs the eardrum which is a thin piece of skin stretched tight like a drum.

When sound waves reach the eardrum, they cause the eardrum to vibrate. When the eardrum vibrates, it moves the tiny ossicles (ah-sih-kulz) and these three tiny bones (the Hammer, Anvil & Stirrup) help sound move along on its journey into the inner ear.



The Inner Ear:

Sound comes into the inner ear as vibrations and enters the cochlea (ko-klee-uh), a small, curled tube in the inner ear. The cochlea is filled with liquid, which is set into motion, when the ossicles vibrate.

The cochlea is also lined with tiny cells covered in tiny hairs that are so small, but they're awfully important. When sound reaches the cochlea, the sound causes the hairs on the cells to move, creating signals that the brain understands as sound. The brain puts it together and you hear your favorite song or someone speaking to you.

Ears Keep You Balanced!

In the inner ear, there are three small loops above the cochlea called semicircular canals. Like the cochlea, they are also filled with liquid and have thousands of tiny hairs. When you move your head, the liquid in the semicircular canals moves, too. The liquid moves the tiny hairs, which send a message to your brain about the position of your head. In less than a second, your brain sends messages to the right muscles so that you keep your balance.

Ever get dizzy? Try filling a cup halfway with water. Now move the cup around in a circle in front of you, and then stop. Notice how the water keeps swishing around, even after you've stop moving it? That's what happens in your semicircular canals when you spin in circles and get dizzy. When the fluid stops moving - you get your balance back!