

Hear For Life® Educational Materials

How is hearing loss diagnosed?

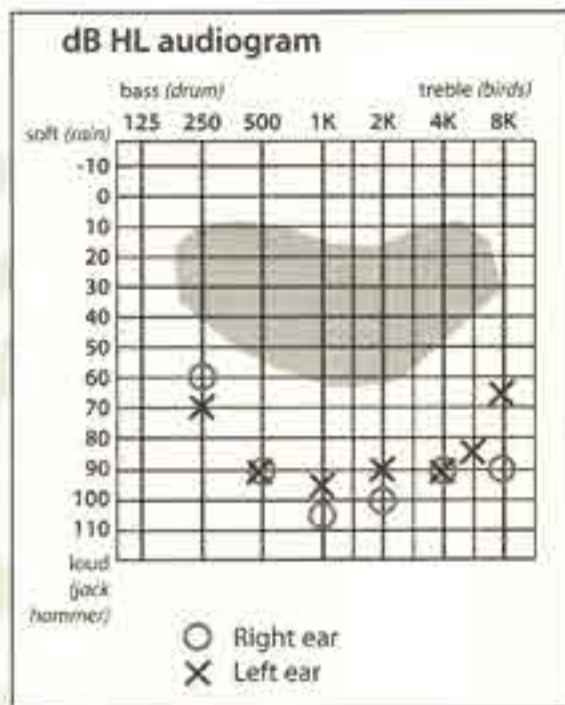
During your hearing test, you will listen to various tones through a set of earphones. The tones will vary in pitch, from low frequency (bass) tones to high frequency (treble) tones. (To better understand pitch, imagine a piano keyboard with the bass on the left and the treble notes on the right.) The tones will also vary in loudness. The audiologist will record the point at which you just barely hear each tone on a form called the audiogram.

During your hearing test, the audiologist will also test your ability to understand speech at various loudness levels. The shape of your audiogram will indicate your type of hearing loss. The audiologist is trained to recognize the specific patterns of hearing loss associated with particular medical ear conditions. The audiogram will also tell the audiologist what speech sounds you may be missing.

If your audiogram suggests a medical ear problem, you will be referred to your doctor. If you do



not have a medical ear problem, this information, along with a detailed discussion of your personal communication requirements, will help the audiologist select the best hearing solutions for you. This solution may include hearing aids or special devices for use with television or the telephone, or maybe just some counseling about ways to get along better with your hearing loss.



Types of hearing loss

To understand hearing loss requires a basic understanding of how we hear.

Your outer ear acts like a dish that collects sound waves. These sound waves travel along the ear canal and vibrate against the eardrum. In the middle ear, three tiny bones (the smallest bones in the human body) transfer the vibrations to the fluid-filled cochlea in the inner ear. This creates ripples in the fluid which bend the hair cells in the inner ear. Then, this movement is converted into electrical impulses that are carried through the auditory nerve to the brain, where they are translated into meaningful sounds.

As you can see, hearing is a complex process. As with any such process, a lot of things can go wrong. Here is an outline of the most common types of hearing loss:

Sensorineural loss (sometimes called, incorrectly, "nerve deafness") indicates that the nerve endings in the inner ear are not transmitting sound properly. *About ninety percent*

of all hearing loss is sensorineural.

Conductive hearing loss means sound is not traveling through the eardrum or ear bones properly.

Otosclerosis simply means the tiny bones inside the middle ear don't transmit sound properly between the eardrum and the inner ear (a type of conductive hearing loss).

Acquired hearing loss usually becomes noticeable when people are 50 years old or older. It is a form of sensorineural hearing loss that results from many years of exposure to a variety of influences, often including environmental sounds or certain types of chemicals or medication. In the past, this loss was frequently labeled "presbycusis."

