University Hospitals Sussex
NHS Foundation Trust

How to Read hearing Test Results

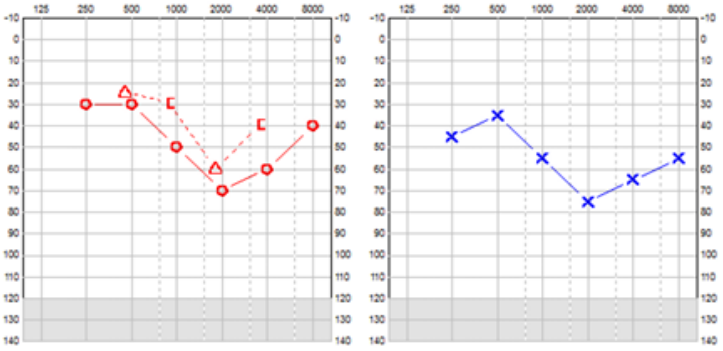
After your hearing test, your audiologist will discuss the results with you. The main tool used is a graph called an **audiogram**, which visually maps what you can and cannot hear. Think of it as a "map" of your hearing.

Understanding the Audiogram

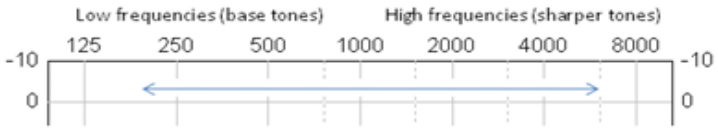
The graph has **two lines**:

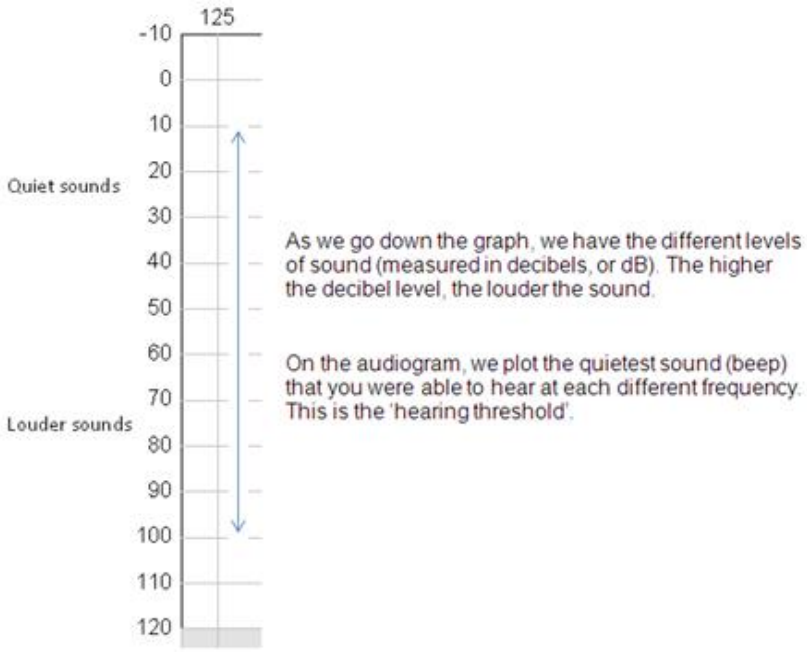
- **Circles (O)** – represent your right ear
- **Crosses (X)** – represent your left ear

At first glance, it might look confusing because your right ear is shown on the left side of the graph. This is simply from the audiologist's perspective when facing you.

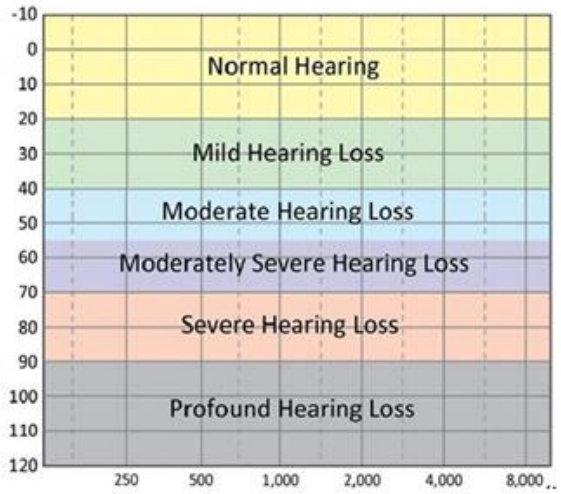


As we go across the top of the graph, we have the different frequencies or 'pitches' (measured in hertz, or Hz). Think of it like a piano, we have the base tones on the left end and the high tones at the right end.



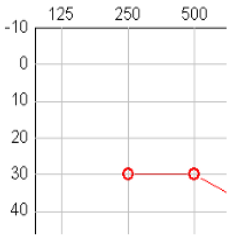


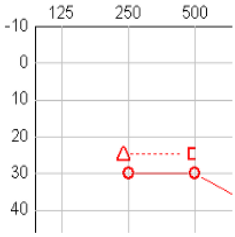
The audiogram below helps show the different levels of hearing loss and where they appear on the chart. It may look a bit unusual at first—the softest sounds are shown at the top of the graph, while louder sounds are towards the bottom.



In the example below, the softest beep detected at 250 Hz in the right ear—a very low-pitched sound—was 30 dB, indicating a mild hearing loss at this frequency. The same threshold was observed at 500 Hz.

Air





Conduction vs. Bone Conduction

- **Air**

conduction (O and X symbols) – measures hearing through traditional headphones.

- **Bone conduction (Δ and [symbols)** – measures hearing through a small device placed behind the ear, transmitting sound directly to the inner ear.

Bone conduction testing helps identify **where the hearing loss originates**, allowing audiologists to classify the type of hearing loss as **sensorineural**, **conductive**, or **mixed**.

Types of hearing loss

Sensorineural: this type of hearing loss is usually permanent and originates in the cochlea or 'inner ear'. There are many causes of this type of hearing loss, such as genetics, illness before

birth or during childhood, certain medications, damage to the inner ear from an accident or noise damage.

Conductive: This type of hearing loss occurs when sound is unable to travel efficiently to the inner ear due to a blockage or issue in the outer or middle ear. The inner ear itself remains normal, but sounds cannot reach it properly. Conductive hearing loss can be temporary or permanent. In some cases, surgery can correct the underlying problem or remove the blockage. Hearing aids can help amplify sounds past the obstruction and may also serve as a long-term alternative if surgery is not an option

Mixed hearing loss: A combination of sensorineural and conductive hearing loss.

Levels of hearing loss:

Within normal limits (-10 to 20dB): hearing is normal for an average adult.

Mild (20-40dB): there is a small degree of hearing loss, so quiet sounds like whispering and leaves rustling may not be heard. Hearing conversation in a quiet environment may be manageable but may be more difficult at a distance or somewhere noisy.

Moderate (40-70dB): this degree of hearing loss will cause difficulty hearing mild and moderately loud sounds such as human voices, footsteps or a toaster popping. Many household sounds may be missed or appear far away. Conversation in quiet may be manageable, but some words can be missed. In the presence of background noise, communication will be much more difficult.

Severe (70-95dB): a severe hearing loss may noticeably affect a person's ability to communicate with others. In conversation, a person with a severe hearing loss will need others to speak with a clear raised voice and may sometimes still mishear words. Conversations in groups and in background noise can cause them to feel very lost. A person with a severe hearing loss can miss most household sounds such as the doorbell and telephone ringing and may struggle to hear sounds such as a baby crying or a vacuum cleaner. They also may rely on lip reading in conversation, whether consciously or subconsciously.

Profound (95+dB): a profound hearing loss refers to very little or no hearing. Conversation will be very difficult in noise and in quiet, and people with a profound hearing loss may rely on lip reading or using sign language, even with the use of hearing aids. They may not be able to hear very loud noises like music at a rock concert or a jet plane, or it may be very faint.

Mixture of different degrees at different frequencies (mild to moderate, mild to severe etc.): Many patients do not have a 'flat' hearing loss across all pitches. If this is the case, some sounds can be heard much easier than other sounds: a person can hear a knock at the door quite easily but will miss hearing the birds singing. In conversation, some people may hear voices but will miss the clarity of what is being said, causing everything to sound muffled. In quiet, a person with a mild to severe hearing loss may manage fine if the speaker has a clear voice but will struggle much more in the presence of background noise.