



[This page prints out on 3 sheets]

## Audiograms

Read this page to learn what your child's audiogram means.

### What an audiogram is

An audiogram is a chart or graph that shows the softest sounds your child can hear at different frequencies or pitches. These sounds are called **thresholds**. The audiologist marks on a graph your child's threshold at different pitches.

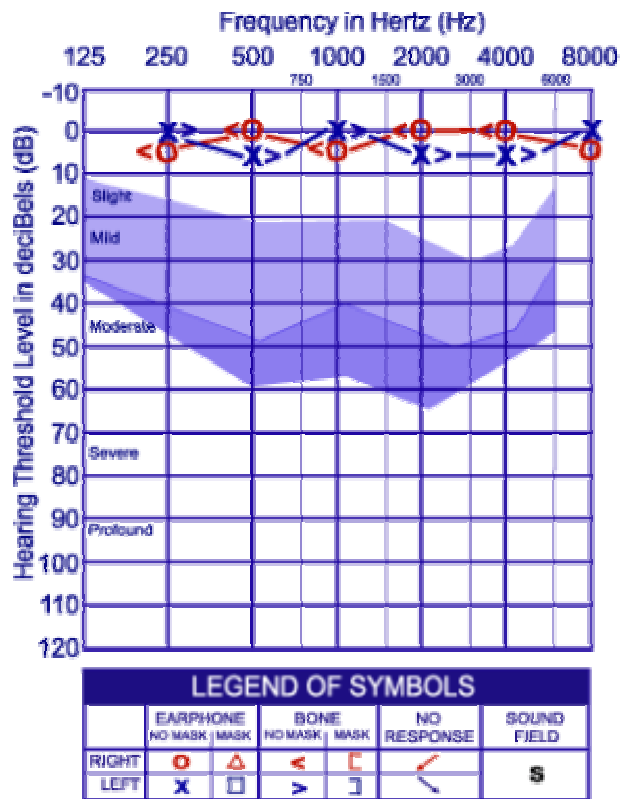


Image courtesy of [EDEN - The Electronic Deaf Education Network](http://www.bradinrao.com/) (<http://www.bradinrao.com/>)

This is an audiogram of normal hearing. The red and blue marks show the softest sounds this person could hear in her right (red) and left (blue) ears. The shaded areas show the range of speech sounds. This is called the "speech banana."

This person can hear sounds even softer than the speech sounds. But if your child can't hear sounds in the area of the speech banana, she will have trouble understanding what people say.

### **How to read an audiogram**

#### From left to right – frequency

- **Frequency** refers to how high- or low-pitched a sound is.
- Frequency is measured in **Hertz (Hz)**.
- Low-pitched sounds are towards the left of the audiogram. Vowels like "a," "e" and "i" are examples of low-pitched sounds.
- High-pitched sounds are towards the right of the audiogram. Sounds like "th," "f" and "s" are examples of high-pitched sounds.

#### From top to bottom – hearing threshold (loudness)

- The loudness of a sound is measured in **decibels (dB)**.
- Loud sounds are towards the bottom of the audiogram.
- Quiet sounds are towards the top of the audiogram.
- The range of speech sounds are shown in the shaded area.
- About half of spoken sounds are above the darker area.

When your child has a hearing loss, she may not hear some sounds because they are too soft, or the pitch is too high or low. Read more about this on our page about [the sounds we hear](http://www.raisingdeafkids.org/hearing/sounds.jsp) (<http://www.raisingdeafkids.org/hearing/sounds.jsp>).

### **Audiograms of different kinds of hearing loss**

Click on the links below to see the audiograms of different kinds of hearing loss:

- [Mild to moderate conductive hearing loss in the right ear](http://www.raisingdeafkids.org/hearingloss/testing/audiogram/ome.jsp) (<http://www.raisingdeafkids.org/hearingloss/testing/audiogram/ome.jsp>)
- [Bilateral mild to moderate sensorineural hearing loss](http://www.raisingdeafkids.org/hearingloss/testing/audiogram/cookie_bite.jsp) ([http://www.raisingdeafkids.org/hearingloss/testing/audiogram/cookie\\_bite.jsp](http://www.raisingdeafkids.org/hearingloss/testing/audiogram/cookie_bite.jsp))
- [Bilateral mild sloping to profound sensorineural hearing loss](http://www.raisingdeafkids.org/hearingloss/testing/audiogram/slope.jsp) (<http://www.raisingdeafkids.org/hearingloss/testing/audiogram/slope.jsp>)
- [Bilateral mild precipitously sloping to profound hearing loss](http://www.raisingdeafkids.org/hearingloss/testing/audiogram/ski_slope.jsp) ([http://www.raisingdeafkids.org/hearingloss/testing/audiogram/ski\\_slope.jsp](http://www.raisingdeafkids.org/hearingloss/testing/audiogram/ski_slope.jsp))
- [Bilateral profound sensorineural hearing loss](http://www.raisingdeafkids.org/hearingloss/testing/audiogram/corner.jsp) (<http://www.raisingdeafkids.org/hearingloss/testing/audiogram/corner.jsp>)

### **How the audiologist will test your child's hearing**

To find out what your child's thresholds are, the audiologist may test your child's hearing through **air conduction** and **bone conduction**.

- An **air conduction test** checks all 3 parts of the ear. In this kind of test, your child listens to sounds of different loudness and pitch through earphones or speakers on the wall.
- A **bone conduction test** just checks your child's inner ear. In this test, the audiologist puts a **bone oscillator** behind your child's ear, or on her forehead.

After the tests, the audiologist marks your child's hearing thresholds for both air and bone conduction on an audiogram.

Read our [Hearing Tests](http://www.raisingdeafkids.org/hearingloss/testing/hearingtests/) (<http://www.raisingdeafkids.org/hearingloss/testing/hearingtests/>) page and our [Hearing Tests FAQ](http://www.raisingdeafkids.org/hearingloss/testing/hearingtests/faq.jsp) (<http://www.raisingdeafkids.org/hearingloss/testing/hearingtests/faq.jsp>) to learn more about different kinds of hearing tests.

### **What the audiogram tells you:**

- What sounds of spoken language your child hears and doesn't hear.
- What kinds of hearing aids might help your child.
- What type of hearing loss your child has.
  - If your child has a [conductive hearing loss](http://www.raisingdeafkids.org/hearingloss/types/conductive.jsp) (<http://www.raisingdeafkids.org/hearingloss/types/conductive.jsp>), she may need medical treatment.
  - If your child has a [sensorineural hearing loss](http://www.raisingdeafkids.org/hearingloss/types/sensorineural.jsp) (<http://www.raisingdeafkids.org/hearingloss/types/sensorineural.jsp>), she may need hearing aids.

### **If your child wears hearing aids**

- If your child gets hearing aids, the audiologist will test her hearing with and without the hearing aids.
- The audiogram shows how much the hearing aids help your child hear.

### **Learn more about audiograms**

- Read "[Understanding Your Audiogram](http://www.audiology.org/consumer/guides/uya.php)" (<http://www.audiology.org/consumer/guides/uya.php>).
- Read "[Understanding the Audiological Evaluation](http://clerccenter.gallaudet.edu/SupportServices/series/5002.html)" (<http://clerccenter.gallaudet.edu/SupportServices/series/5002.html>). This page explains some of the words you may hear during a visit to the audiologist.

*This page was last edited on December 19, 2003.*

You can find this page online at:  
<http://www.raisingdeafkids.org/hearingloss/testing/audiogram/>