

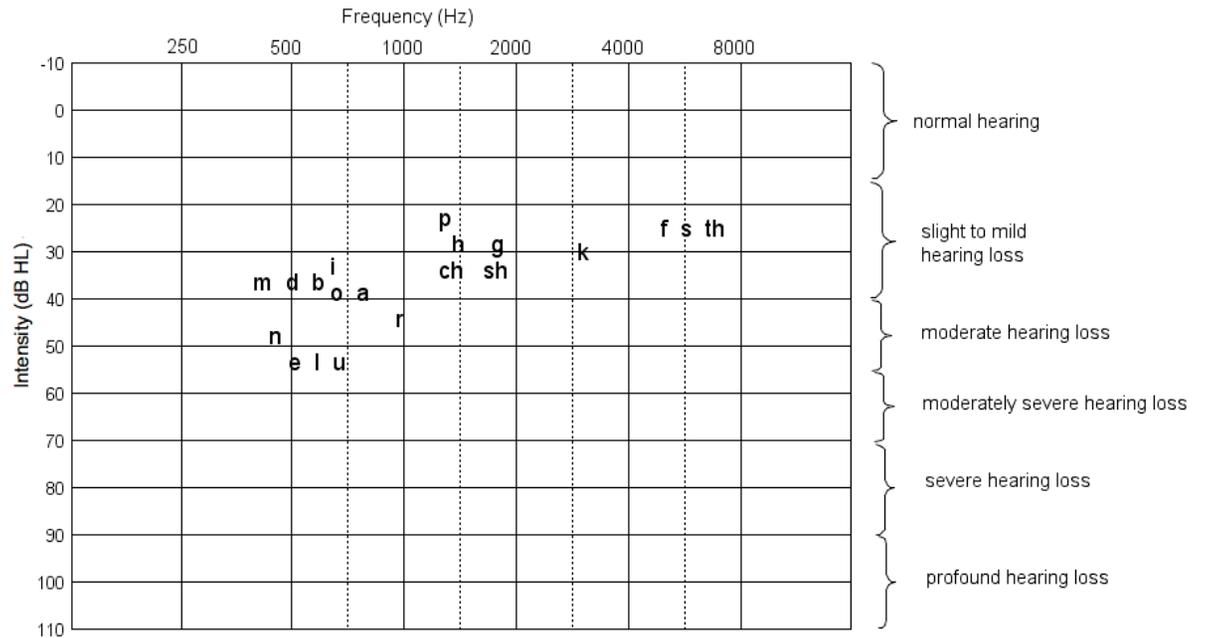
## I just found out my child has a hearing loss. How well will my child hear speech?

Speech sounds differ in terms of frequency (pitch) and intensity (loudness). Vowel sounds such as ‘a’, ‘e’, ‘i’, ‘o’, and ‘u’, tend to be lower in frequency (pitch) and louder in intensity. Consonants such as ‘s’, ‘p’, ‘t’, ‘sh’, ‘k’ and ‘f’ tend to be higher in frequency and softer in intensity.

How much hearing loss your child has will determine how he or she will be able to hear normal conversational speech.

Here are the responses to speech you might expect with different levels of hearing (or degrees of hearing loss):

- **Normal hearing (0-15dB):** Your child will likely be able to detect and discriminate all speech sounds even at very quiet levels.
- **Slight (16-25dB) and Mild hearing loss (26-40dB):** Your child might have difficulty hearing faint or distant speech and have difficulty in group environments. Your child will likely be able to hear sounds at close distances and in quiet environments.



- **Moderate (41-55dB) and Moderate-Severe hearing loss (56-70dB):** Your child might have difficulty detecting and discriminating consonants (e.g., the s, sh, th, ch, f, k, and p sounds) and might rely on combined clues from several sounds, words, and patterns of speech to understand what is said.

- **Severe hearing loss (71-90dB):** Your child might be able to identify environmental sounds; he or she might be able to discriminate vowels but will likely have difficulty discriminating consonants.

- **Profound hearing loss (91-110dB):** Your child will likely only hear loud environmental sounds and feel vibrations.

### How Do I Read the Audiogram Showing Hearing Loss?

This graph is called an audiogram, and is used to display the results of a hearing test. This audiogram shows the categories of hearing loss. Some speech sounds are shown on the graph, showing the frequency (pitch) and intensity (loudness) of each sound.

- Across the top of the graph are numbers representing frequency (pitch). These numbers (measured in Hz) represent the frequencies (pitches) of the sound presented to your child. The low frequencies are on the left and the high frequencies are on the right.

- On the left side of the graph are numbers representing the intensity (or loudness). The further towards the bottom of the graph, the louder the speech sound. In terms of hearing loss, the further towards the bottom of the graph, the more severe the hearing loss.

Children often have hearing loss that is a combination of different levels for different pitches. An example is a mild hearing loss in the low pitches and a severe hearing loss in the high pitches.

**Untreated** hearing loss can have significant negative effects on speech and language development.

**Treatment** of hearing loss (medical treatment and/or hearing devices) can significantly minimize the negative effects of hearing loss. Hearing aids or other hearing devices are usually needed for permanent or persisting hearing loss.

You should work with your audiologist and other professionals to be sure to get appropriate treatment and a follow-up plan for your child's hearing loss.

### **Contact information:**

Audiology Department  
Room K2-192  
Hours: 8:30 to 4:30  
(604) 875-2112  
website: <http://www.bcchildrens.ca/Services/ClinicalDiagnosticFamilyServices/Audiology/default.htm>

*Developed by the health care professionals  
of the Audiology Department with  
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# Effects of Hearing Loss on Ability to Hear Speech

