



Carle Foundation Hospital

Expanding Children's Hearing Opportunities (ECHO)

Understanding the Audiogram

An audiogram is a graph of your child's thresholds, meaning the quietest sounds he/she can hear. In the very young child true thresholds may not be obtained due to developmental abilities. Minimal response levels will be obtained that indicate the softest levels at which the child consistently responds. True thresholds of hearing will be slightly better. Across the top of the audiogram are numbers ranging from 125-8000, depicting the pitches (frequencies) of the sounds which are tested. Lower pitches are depicted to the left and higher pitches are depicted to the right. Along the left side of the audiogram are numbers ranging from about -10 to about 120. These numbers depict the loudness of the sounds, in decibels (dB). Numbers at the top indicate soft sounds and numbers at the bottom indicate very loud sounds.

When the audiologist tests a child's hearing, he/she finds the softest level to which the child can respond at different pitches. He/she then puts a mark on the audiogram denoting the softest level the child responds to at that pitch. The symbol "O" represents responses from the right ear obtained through earphones. The symbol "X" represents left ear responses from earphones. If the audiologist was unable to obtain separate responses from each ear using earphones and used speakers instead, the symbols "S" or "NBN" may be used to represent how your child heard using both ears in the soundfield. An arrow at the bottom of the symbol denotes that no response was obtained for that pitch.

When looking at your child's audiogram you may also see bracket symbols as follows: "<", ">", "[", "]". These brackets indicate test results obtained through a special headset called a bone conduction vibrator. This measures bone conduction which is how sounds are heard when the inner ear is directly stimulated by vibrations against the bone behind the ear. These responses are used for determining the type of hearing loss your child has (conductive, sensorineural, or mixed).

Hearing loss is described not only in terms of the type of loss, but also in terms of the degree of loss. Hearing loss can range from mild, moderate, severe, to profound. Children can have different degrees of impairment at different pitches. There are different implications for children with different degrees of hearing loss, so it is important for parents to understand their child's degree of hearing loss. Professionals working with your child will strive to help you obtain information and services appropriate for the degree of hearing loss present.