

## HOW MIGHT A HEARING LOSS AFFECT A BABY?

Hearing is very important for newborn babies. A hearing loss can have a significant effect on a child's development. Without help, a child with a hearing loss may experience difficulties communicating with others, delayed speech and language development, difficulty playing with family and friends, and difficulty learning in school. However, with early identification, appropriate hearing technology and early education support, the impact of hearing loss on each child's development can be reduced.

### POSSIBLE IMPACTS OF HEARING LOSS-WITHOUT USE OF HEARING TECHNOLOGY

Degree of Loss	Possible Impact on a Child's Communication and Learning
<b>Minimal</b> <b>16-25 dBHL</b>	<ul style="list-style-type: none"><li>• May have difficulty hearing faint or distant speech</li><li>• With a 15 dBHL hearing loss, can miss 10% of speech when speaker is at a distance greater than 3 feet or when there is background noise</li><li>• A 20 dBHL or greater hearing loss can result in absent, inconsistent, or distorted parts of speech, especially word endings (-s, -ed) and unemphasized sounds</li><li>• May miss portions of fast-paced conversation with friends</li><li>• May be more fatigued due to the extra effort needed to listen</li></ul>
<b>Mild</b> <b>26-40 dBHL</b>	<ul style="list-style-type: none"><li>• Can "hear" speech, but misses parts of conversation leading to misunderstanding</li><li>• At 30 dBHL can miss 25-40% of spoken message</li><li>• At 35-40 dBHL can miss at least 50% of conversation, especially when voices are faint or distant, or the speaker is not in line of vision</li><li>• Will miss brief or unemphasized words and consonants, especially when a high frequency hearing loss is present</li><li>• Begins to have difficulty hearing over background noise, making listening more stressful</li><li>• Often has difficulty learning early reading skills such as letter/sound associations.</li></ul>
<b>Moderate</b> <b>41-55 dBHL</b>	<ul style="list-style-type: none"><li>• Understands conversational speech at 3-5 feet (face-to-face) only if words and sentences are familiar</li><li>• A 40 dBHL hearing loss can impeded 5-75% of a spoken message</li><li>• A 50 dBHL loss can impeded 80-100% of a spoken message</li><li>• Is likely to have poor grammar, limited vocabulary, speech errors, and flat voice quality</li><li>• Hearing loss may significantly affect communication with friends and family</li><li>• Even with hearing aids, may "hear" but may miss some of what is said</li></ul>

<b>Moderate to Severe 56-70 dBHL</b>	<ul style="list-style-type: none"> <li>• Without amplification, speech must be very loud to be understood</li> <li>• A 55 dBHL loss can cause 100% of speech information to be missed</li> <li>• Without hearing aids, may be aware of loud conversation, but will have difficulty understanding speech (with optimal amplification, should be able to hear conversational speech within quiet environments)</li> <li>• Ability to understand greatly reduced by increased distance and noise</li> <li>• Without amplification and intervention, will have delayed language, poor grammar, speech errors and flat voice quality</li> <li>• May rely on vision to supplement hearing in order to understand communication</li> </ul>
<b>Severe 71-80 dBHL</b>	<ul style="list-style-type: none"> <li>• Without amplification, may hear loud noises 12 inches from ear (with optimal amplification should be able to <u>identify</u> environmental sound and <u>detect</u> many speech sounds presented from close distance)</li> <li>• May be unable to <u>perceive</u> higher pitch speech sounds important for understanding words</li> <li>• If loss present at birth, oral language and speech may not develop spontaneously or will be severely delayed</li> <li>• Use of visual communication system may be needed</li> <li>• May have difficulty interacting with hearing peers</li> </ul>
<b>Profound 90 dBHL plus</b>	<ul style="list-style-type: none"> <li>• May be aware of vibrations more than tonal patterns</li> <li>• Detection of speech sounds dependent upon pattern of the hearing loss and optimal use of amplification or cochlear implant</li> <li>• Speech and language will not develop spontaneously</li> <li>• May rely on vision rather than hearing as a primary avenue for communication and learning</li> <li>• Choice and consistent use of appropriate communication system by family is essential</li> </ul>
<b>Unilateral</b>	<ul style="list-style-type: none"> <li>• May have difficulty hearing faint or distant speech</li> <li>• Usually has difficulty localizing sounds and voices</li> <li>• Will have greater difficulty understanding speech when environment is noisy</li> <li>• May be accused of “selective listening” due to differences in understanding speech in quiet versus noise</li> <li>• May appear inattentive or frustrated due to greater effort needed to listen</li> </ul>

Adapted from Karen L. Anderson, EdS and Noel Matkin, PhD  
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