American Society for Deaf Children

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I Suspect My Baby Has a Hearing Loss—What Should I Do?

If you suspect your baby or young child has a hearing loss the best thing you can do is to find out whether or not your suspicions are correct. The only way to confirm a hearing loss is through audiological testing done by a qualified audiologist, preferably one experienced with very young children. Informal testing, such as a pot banging, shaking keys behind the child's head or calling to the child, is not reliable.

Some people, including medical personnel such as pediatricians, may discourage you from getting your child's hearing tested. You may be advised to "wait and see" or told that the child is too young. In fact, there is no advantage to waiting, and no child is too young. The technology is available to test the hearing of all children of all ages. In fact, increasing numbers of states have implemented newborn hearing screening programs to check the hearing of newborns before they leave the hospital.

Research shows that babies who are identified early and receive appropriate early intervention from qualified professionals show a higher level of language development than those who are identified late. Early intervention generally focuses on the child's language and communication development and may include both signed and spoken language, as well as assistive technology such as hearing aids. Qualified professionals include audiologists, speech therapist, teachers of the deaf and hard of hearing, and others. Early identification combined with appropriate early intervention can help keep your child's language and cognitive development on track.

There is a variety of tests involved in documenting whether a child has a hearing loss and defining the characteristics of that hearing loss. Documenting the exact degree of hearing loss may take multiple test sessions over time.

- **Otoacoustic Emissions Screen (OAE)** This is most often used as a screening to indicate whether there is some degree of hearing loss. It is not a full test to confirm the exact level of hearing loss. It takes only a few minutes and can be completed while the child is awake. To achieve accurate results, the child must be still. A small ear piece which is attached to a computer at one end is inserted into each of the child's ears, and sounds are transmitted. A normally functioning cochlea will produce an echo oremission when this is done. If the computer measures that this echo is present, it suggests that the hair cells in the cochlea of the inner ear are functioning. The child is considered to have normal hearing and is not referred for further evaluation. If the computer does not record an emission, it suggests that the hair cells are not working, meaning the child may have a hearing loss. If the OAE does not register normal hearing, further evaluation to obtain more definitive results should be arranged. This should involve a battery of objective and subjective test measures, including auditory brainstem evoked response evaluation (also known as ABR, BSER, or BAER) and behavioral

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audiometry.

- **Auditory Brainstem Response Evaluation (ABR)** During an ABR, the child must be asleep and is usually sedated. Again, earphones are placed on each of the child's ears, sounds are transmitted, and a computer documents each ear's response to sound using electrodes that rest on the child's head. The child does not actively participate in the test. This painless procedure may take an hour or more in order to document the quietest decibel level a child can hear at a variety of sound pitches.

- **Behavioral Audiometry.** During behavioral evaluations, a child's responses to a variety of sounds, speech sounds, pure tone sounds, and others, are observed in a variety of conditions, such as through headphones and through room speakers. These tests are completed in a small, soundproof room. Determining which technique to use is based on the age of the child.

    - Behavioral observation audiometry (BOA) is used for children from birth until they are old enough to be trained to turn to a sound, which can be as early as 6 or 7 months. In BOA, reactions to sound such as changes in sucking patterns, movement levels, or breathing, as well as eye widening or startling to sound are observed. The quietest levels a child responds to are documented.

    - Visual reinforcement audiometry (VRA) is used when a child develops the ability to turn to sound, which may be as young as about 6 months of age. During VRA, each time a child hears a sound and looks toward the source of the sound he is rewarded by seeing a motivational toy such as a moving clown or bear. This technique is usually used until about 2 1/2 to 3 years of age.

    - Conditioned play audiometry (CPA) is a technique that each time a child hears a sound, she is conditioned to place an object in a box or a ring on a stick or complete a variety of other games.

If your child is identified with a hearing loss, contact your local school district to inquire about early intervention services. If your child is not identified with a hearing loss but you continue to have concerns about listening and language development, discuss them with your pediatrician.

While most parents hope to find out that their child does have normal hearing, be assured that children who are deaf or hard of hearing, given appropriate early intervention, education, and family supports, can grow into warm, wonderful, productive, successful older children and adults.

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No one knows your child better than you do. If you have questions or concerns about your child's development, you deserve to have them answered.

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