

Did You Know (Continued)

Studies estimate that as much as 90% of what young children learn is attributable to the reception of incidental conversations around them (Flexer, 1993).

37% of children with only minimal hearing loss fail at least one grade (Bess, 1998).

All children can be evaluated for hearing loss. Even children who are only minutes old can have their hearing assessed using tests that are safe, painless and easy to administer.

Recent NIH studies have shown that children with hearing loss who are identified and receive early intervention prior to six months of age develop significantly better language ability than children identified after six months of age.

The average age of identification of early-onset hearing loss in the US is two years of age.

What types of hearing losses are found in children?

There are basically three types of hearing loss. The kind of hearing loss that is permanent and is the result of something affecting the inner ear, or the nerve that deals with hearing (the auditory nerve), is called sensorineural hearing loss. There are many different causes of sensorineural hearing loss, including congenital infections, medications, noise, and genetics. In 50% of congenital hearing loss cases, a cause is never found. Congenital hearing loss is present in three to six out of every 1000 newborns and is detectable at birth. Sensorineural hearing loss can also develop later in life for various reasons, one is which excessive exposure to loud noise.

Another type of hearing loss is called conductive hearing loss. Conductive hearing loss is the result of something affecting the outer or middle ear, such as ear infections associated with fluid in the middle ear space. Middle ear infections are the second-most common reason children see physicians. Any time children have middle ear infections with fluid in their ears, they have an accompanying hearing loss. Other common causes of conductive hearing loss include excess wax, foreign bodies, or swelling of the auditory canal. In most cases, conductive hearing losses can be treated either medically or surgically, and are not permanent.

Finally, mixed hearing losses are combinations of sensorineural and conductive hearing losses.

My child has had frequent middle ear infections; will this affect his hearing?

A middle ear infection, or otitis media, is caused by a bacterial or viral infection that affects the middle ear. Middle ear infections that are associated with fluid in the middle ear space can cause a mild hearing loss. This hearing loss is an approximately 20 dB hearing loss, and is similar to what it sounds like if you were to put two fingers in your ears and talk. Everything sounds muffled. Any type of infection of the upper respiratory tract, such as the common cold, ear infections or allergies, can cause this type of hearing loss. Young children are particularly susceptible to these types of infections because their Eustachian tubes are smaller and positioned differently than adults.

The average elementary school child has about seven upper respiratory infections in a year. This is important, because the accompanying hearing loss can last for weeks or even months, and impacts a child's ability to learn in a classroom setting. A child with this type of hearing loss can miss up to 30 - 50 percent of what a classroom teacher says.

If your child's ear infections are treated appropriately and always resolve with treatment, it is unlikely that they will result in a permanent hearing loss. It is important, however, that children be seen and followed closely by a physician or an audiologist for these types of infections to prevent permanent damage.

How can I tell if my child has a hearing loss?

Hearing loss is invisible, and the signs of a hearing loss are subtle in young children. The following are developmental guidelines for children with normal hearing; if your child is not reaching these milestones, they should see their physician or audiologist to have their hearing tested.

My child is a newborn. Can children that young be assessed for a hearing loss?

Absolutely. Children of any age can have their hearing assessed. Children even minutes old can be screened for hearing loss. Newborns can be tested by several methods which are non-invasive, computerized and take only a short period of time. The earlier a child is diagnosed with a hearing loss, the earlier they can obtain appropriate treatment, and consequently develop speech and language skills along with their peers.

What should I do if I suspect that my child has a hearing loss?

The first thing to do if you suspect a hearing loss in your child is to have his or her hearing assessed. Begin by taking your child to their primary care physician, who should examine your child and interact with him or her.

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Your physician will ask you several questions regarding family history of hearing loss, your family's and your child's past medical history, and your concerns about why you believe your child has a hearing loss. Your primary care physician will then refer you to an ENT doctor (an otolaryngologist) and /or an audiologist who will perform a series of tests to assess your child's hearing. Parents are the ones who most frequently suspect hearing loss in their children, not healthcare professionals. Trust your instincts, and if you are concerned about a hearing loss your child, have his or her hearing tested by an audiologist!

What can I expect to be done for my child if she does have a hearing loss?

There are many options available for children with hearing loss today. Children as young as three months of age can be fitted with hearing aids. Toddlers with profound hearing loss are now utilizing cochlear implants. Options exist in terms of modes of communication as well, ranging from auditory-oral, auditory-verbal, and Cued Speech approaches, to American Sign Language and Total Communication. The book Choices in Deafness by Sue Schwartz, Ph.D. provides parents with a solid background in each of these options.

It is crucial to diagnose hearing loss in children as early as possible so that amplification technology can be used to get sound to the child's developing brain as soon as possible. Children who are diagnosed prior to six months of age and fitted with either hearing aids or cochlear implants, along with vigorous speech, language, and oral rehabilitation, develop close to--or at the same rate--as their peers. The key is early diagnosis, early intervention and early brain development.

Can loud noises affect children's hearing?

Yes, it is important to protect whatever hearing a child or adult has. Very loud noises can damage one's hearing, and can do so permanently. Exposure to high intensity noise can permanently damage the inner ear. Headphones, rock concerts, video arcades, and very loud noises should be avoided if possible, and if unavoidable, protective earplugs should be worn during exposure. It is more important than ever to avoid this unnecessary type of hearing loss...through prevention.

What types of modifications can be made in a classroom for children with hearing loss?

There are many modifications that can be made in a classroom to help children with hearing loss. In conjunction with hearing aids or cochlear implants, there are modifications that can be made to the classroom itself to make it a more acoustically favorable environment.

****Red Flags****

Birth to 4 months:

- Most babies are startled by sudden loud sounds
- When sleeping in a quiet room. the baby moves or wakes up at the sound of voices or noises
- Babies seem to calm down when they are crying--even for a moment--at the sound of mother's voice
- Babies seem to recognize their mother's voice better than other voices
- At three to four months, babies will turn their head toward a sound

4 to 8 months:

- Babies will turn their head and eyes toward a sound when the sound is coming from outside the child's peripheral vision
- Babies begin to enjoy the sound of musical toys (rattles, bells, etc.)
- At approximately six months of age, babies begin babbling in response to someone talking to them

8 to 12 months:

- Babies' voices go up and down when vocalizing
- Babies turn directly toward a soft noisemaker, or to the calling of their name
- Babies seem to enjoy music and respond by listening, bouncing, or "singing" along

12 to 16 months:

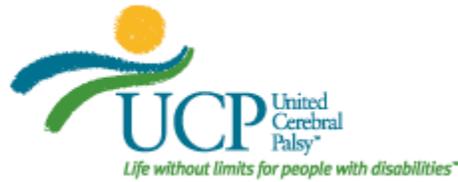
- Children understand many words, and speak about 25 single words

18 to 24 months:

- Children undergo a "name explosion", they begin to understand that everything has a word that goes with it, and they begin speaking two word sentences. Children know about 100-200 words

24 to 36 months:

- Children begin speaking more fully in sentences, and usually know about 200-400 words



Information supplied by:

**Childcare Enhancement
With A Purpose
(CCEP)**

**Stephanie Eger
Project Coordinator**

**Amelia Hardin
Dee McNalley
Developmental Specialists**

**United Cerebral Palsy
of Huntsville & TN Valley
256.859.4900**



United Cerebral Palsy

**Understanding Disabilities
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Facts About Hearing Loss in Children



Did you know that...

Hearing loss is the most common congenital anomaly found in newborns...and yet not all newborns are routinely tested for it.

Approximately three per 1000 babies are born with a significant hearing loss, and many more children are born with milder forms of hearing loss (White, Mehl, and Thompson, 1998).

14.9% of US children ages six to nineteen years old have a measurable hearing loss in one or both ears (Niskar et. al., 1998).

Any degree of hearing loss can be educationally disabling for children. Even children with mild to moderate hearing loss can miss up to 50% of classroom discussions. Unmanaged hearing loss in children can affect their speech, language and education as well as self-image and social/emotional development.

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