

Causes of Hearing Loss in Children

Hearing Loss at Birth (Congenital Hearing Loss)

The term *congenital hearing loss* means that the hearing loss is present at birth. Congenital hearing loss can be caused by genetic or nongenetic factors.

Nongenetic factors account for about 25% of congenital hearing loss. Some nongenetic factors that are known to cause congenital hearing loss include the following:

- maternal infections, such as rubella (German measles), cytomegalovirus (CMV), or herpes simplex virus
- prematurity
- low birth weight
- toxins—including drugs, cigarette smoke, or alcohol that the mother consumed during pregnancy
- jaundice requiring a blood transfusion
- maternal diabetes
- lack of oxygen (anoxia)

Genetic factors (hereditary/inherited) are thought to cause more than 50% of all hearing loss. Hearing loss caused by genetic abnormalities can be present at birth or develop later in life. The pattern by which hearing loss is passed to a child by their parents is called an inheritance pattern. There are several different possible inheritance patterns. The ones most frequently associated with childhood hearing loss are called autosomal recessive or autosomal dominant.

In autosomal recessive hearing loss, both parents carry the recessive gene and pass it along to the child. Parents are often surprised to discover that their child has a hearing loss because they are not aware that they are carrying an abnormal gene. This type of inheritance pattern accounts for about 70% of all genetic hearing loss.

An **autosomal dominant hearing loss** occurs when an abnormal gene from one parent can cause hearing loss even though the matching gene from the other parent is normal. The parent who is carrying the dominant gene may also have hearing loss as well as other signs and symptoms that make up a genetic syndrome. The autosomal dominant pattern accounts for about 15% of all genetic hearing loss cases.

Genetic syndromes have a group of signs and symptoms that together indicate a specific disease. Many genetic syndromes include hearing loss as one of these symptoms. Examples include the following:

- Down syndrome
- Usher syndrome
- Treacher-Collins syndrome
- CHARGE syndrome
- Alport syndrome
- Velo-cardio-facial syndrome (VCFS)
- Waardenburg syndrome

Hearing Loss After Birth (Acquired Hearing Loss)

Acquired hearing loss is a hearing loss that appears after birth. The hearing loss can occur at any time in one's life and may be triggered by an illness or injury. Here are examples of conditions that can cause acquired hearing loss in children:

- untreated ear infections
- medications that are toxic to the ear
- meningitis
- measles
- encephalitis
- chicken pox
- mumps
- head injury
- noise exposure

There are many causes of hearing loss in children. If you are concerned about possible hearing loss, it is recommended that you seek evaluation by a licensed and certified audiologist. Find a certified audiologist on ASHA ProFind online directory.



AUDIOLOGY INFORMATION SERIES

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