

Hearing problems in children

It has long been thought that noise-induced hearing loss is a problem for adults, not children. However, research by US Centres for Disease Control and Prevention suggests that over 12 per cent of American children aged between six and 19 years have hearing loss caused by noise, and that the loss is permanent for around five per cent of them.

Around one in five teenagers expose themselves regularly to high decibel noise (such as rock concerts) and about three quarters of the people who go to nightclubs and discos experience temporary tinnitus or ringing in the ears afterwards. (Tinnitus is a known symptom of hearing damage.)

Apart from noise, other causes of hearing problems in children include otitis media (infection of the middle ear), genetic disorders, and certain diseases (such as meningitis).

Around 12 in 10,000 children are born with a moderate or greater hearing loss in both ears, and at least another 20 in 10,000 will require hearing aids for long term hearing loss by the age of 17 years.

Temporary deafness – a range of causes

Some of the causes of temporary deafness in children include:

- Build-up of wax within the ear canal.
- A foreign object (such as a bead or the tip of a cotton bud) stuck in the ear canal.
- Excess mucus within the eustachian tube, caused by a cold.
- Otitis media (infection of the middle ear).

Permanent hearing loss – a range of causes

Some of the conditions and events that may cause permanent hearing loss in children include:

- Hereditary conditions that cause the inner ear to develop abnormally.
- Some genetic disorders, such as osteogenesis imperfecta and trisomy 13S.
- Exposure to disease while in utero – rubella (German measles) is one of the diseases that can affect the developing ears of the fetus.
- Loud noises, such as firecrackers, rock concerts or personal stereos.
- Injuries, such as concussion or skull fracture.
- Certain diseases, such as meningitis and mumps.

Signs that your baby can hear

Indications that your baby can hear include:

- **Newborn to eight weeks of age** – startles or widens their eyes at sudden noises nearby, and is woken or stirred from sleep by noise.
- **Eight weeks to four months** – looks towards direction of sound, and may quieten while listening.
- **Six to 12 months** – turns head towards known voices or sounds, starts to babble.
- **12 to 18 months** – knows the names of favourite toys, begins to imitate simple words and sounds.
- **18 to 24 months** – has a small vocabulary of single words, and can understand simple directions such as 'Give mummy the ball'.

- **Two and a half to three and a half years** – has clear speech with a good vocabulary.

Signs that may indicate a hearing problem

Some of the indications that your older child may have trouble hearing include:

- Doesn't respond when called.
- Experiences a dip in school grades (because they can't hear the teacher).
- Complains of a ringing sound in their ears (tinnitus).
- Talks too loudly.
- Watches the television with the volume turned up too high.
- Pronounces words incorrectly.
- Appears inattentive and prone to daydreaming.

Diagnosis methods

The type of tests used to diagnose hearing loss depends on the age of the child, but can include:

- Objective tests such as auditory brainstem response testing, which measure the electrical activity in the brain in response to a sound.
- Simple tests such as shaking a rattle nearby and observing the response (Behavioural Observation Audiometry).
- Tests with an audiometer – a machine that produces sounds like beeps and whistles. Whether or not the child can hear certain sounds helps to pinpoint their degree of hearing loss.

Treatment options

Treatment depends on the cause and severity of hearing loss, but can include:

- Antibiotics for otitis media.
- Removal of the foreign object or wax plug.
- Hearing aids to amplify sounds.
- A cochlear implant may be considered in the case of severe or profound hearing loss.
- Vibrotactile aids, which translate sound into vibrations felt through the skin.
- Speech therapy.
- Assistance from a specialist teacher of the deaf to help the child make the most of their residual hearing.

Where to get help

- Your doctor
- Audiologist
- Ear, nose and throat specialist
- Australian Hearing Tel. 131 797
- Better Hearing Australia, Victorian branch Tel. (03) 9510 1577

Things to remember

- Causes of hearing problems in children include otitis media (infection of the middle ear), genetic disorders, exposure to loud noise, and certain diseases (such as meningitis).
- Over 12 per cent of American children aged between six and 19 years have hearing loss caused by noise, and the loss is permanent for around five per cent of them.
- If you have any doubt at all about your baby or child's hearing, have it tested. The earlier a hearing loss is identified, the better for the child's language, learning and overall development.

This page has been produced in consultation with, and approved by:

Australian Hearing

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