

Hearing tests for infants and children

Children start learning language from the moment they are born. Babies use their eyes, ears and other senses to learn about the world around them. If your child cannot hear well, they will have trouble learning spoken language and learning to read.

Hearing also plays an important role in your child's social and emotional development. It is important to recognize the signs of hearing loss early so your child can receive any support they need to achieve their best outcomes.

Why does my baby need hearing screening?

Every year in B.C., about 100 babies are born with permanent hearing loss (approximately 1 out of every 400 births), most of whom are healthy and have no family history of hearing loss. The prevalence increases to about 1 in 50 for babies who need special care at birth.

There are no easily observable signs to indicate when a baby is not hearing well. It is impossible to know exactly how your baby hears by watching their responses to sounds. This is why it is important that every baby has a newborn hearing screening.

What will hearing screening be like for my baby?

In B.C., all babies can have their hearing screened through the BC Early Hearing Program. Your baby's hearing screening may happen in the hospital before you go home or in your community soon after birth. If your baby has not yet received a hearing screening, contact your local public health unit.

The newborn hearing screening test is safe and will not hurt your baby. Soft sounds are played into your baby's ears, while a computer measures the responses back from their ears. Screening is best done at least 12 hours after birth and with your baby resting quietly or asleep.

Newborn hearing screening is important because when hearing loss is found early in life, your baby can receive the support they need for language learning.

What can I do if I think my child is not hearing well?

Hearing loss can be hard to detect at home. A mild degree of hearing loss is sometimes mistaken for other concerns, and it may cause a child to appear distracted or withdrawn.

Hearing can change at any age. Some babies who hear well at birth may develop hearing loss later in childhood. Even if your baby passes their newborn hearing screening, it is important to always pay attention to their awareness of sounds and whether they are meeting their speech and language milestones.

If you have concerns about your child's hearing, it is important to have it tested. Contact your local public health hearing clinic to make a referral or discuss with your family health care provider.

See your health care provider right away if your child has any of the following:

- Ear discharge (fluid draining from the ear)
- Bad smell from the ear
- Reddened skin around the ear
- An object in the ear

- An injury to the ear

What hearing tests will my child receive?

If your child needs further testing after screening, it may include one or more of the following tests.

Tests for babies and toddlers

- **Auditory Brainstem Response (ABR):** Your child needs to be asleep to do this test. Sounds are presented through earphones. Small recording sensors on the forehead and behind each ear measure responses from your child's hearing nerve. The test can be done with your baby asleep naturally, or for older children with a mild sedation
- **Visual Reinforcement Audiometry (VRA):** This test is mostly used for babies over 6 months of age. This test uses your baby's natural head turn response to look for sounds in their environment. Your baby is trained to turn towards sounds using toys that light up
- **Conditioned Play Audiometry:** This test is mostly used for children 2 to 5 years of age. Your child is taught to play a game, such as putting a block into a bucket, every time they hear a sound

Tests for children 5 years of age and older

- **Pure Tone Audiometry:** Sounds are presented through earphones. Your child responds to these sounds by raising a hand or pressing a button
- **Speech Audiometry:** Your child will either repeat words or point to pictures. This test can be combined with pure tone audiometry to give a more complete picture of your child's hearing

Tests for all ages

- **Tympanometry:** This test measures the movement of the eardrum to determine if there is a problem with how sounds travel to the inner ear
- **Otoacoustic Emissions (OAEs):** A small earphone is placed into the ear and plays sounds. The inner part of the ear called the cochlea makes an OAE in response to the presented sounds. Present OAEs usually rule out hearing loss greater than a mild degree

Is hearing loss temporary or permanent?

Hearing loss can be temporary or permanent. Most hearing loss that onsets after birth is temporary and medically treatable.

Assessment by an audiologist will determine if your child has hearing loss, what type and degree of hearing loss it is, and what can be done to support your child. An audiologist is a person who has special training in hearing testing and treatment.

For more information

For information on hearing loss in children, visit [HealthLinkBC File #71a Hearing loss in children](#), contact your local public health office, or visit the BC Early Hearing Program, Provincial Health Services Authority at www.phsa.ca/our-services/programs-services/bc-early-hearing-program.

For more HealthLinkBC File topics, visit www.HealthLinkBC.ca/health-library/healthlinkbc-files or your local public health unit. For non-emergency health information and advice in B.C., visit www.HealthLinkBC.ca or call **8-1-1** (toll-free). For the deaf and hard of hearing, call **7-1-1**. Translation services are available in more than 130 languages on request.