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Hearing Tests

Read this page to learn about different tests for hearing loss.

Why your child needs a hearing test

If you think your child has a hearing loss, you or your doctor may have tried your own "tests." Maybe you rang a bell behind his head, or banged pots together.

These "tests" don't work well. Why?

- Most children with hearing loss watch everything around them. They may see you even when you think they can't.
- Things like clapping hands make a small puff of air. Your child may feel the air, even if he can't hear the noise.



What real hearing tests do

Hearing tests should answer 3 questions:

- Is there a hearing loss?
- If there is, how bad is it?
- What kind of hearing loss does my child have?
 - Is it **conductive**?
(This means the ears are blocked.)
 - Is it **sensorineural**?
(This means the nerves aren't sending information to the brain.)
 - Is it a mix of the two?
 - Is it in both ears ([bilateral](#)) or just one ear ([unilateral](#))?

How hearing tests are used

- Audiologists may use several different hearing tests.
- Audiologists compare the results of one test against the results of another.
- All test results should make sense.

The different kinds of hearing tests

To find out if the ear isn't working:

- [OAE \(otoacoustic emissions\)](#)
This test tells the audiologist if the ear is blocked or if the cochlea is damaged.
- [ABR \(auditory brainstem response\)](#)
This tests whether sounds are getting to the brain.
This test is also called a:
 - [BAER \(brainstem auditory evoked response\)](#)
 - [BSER \(brainstem evoked response\)](#)
 - [BAEP \(brainstem auditory evoked potential\)](#)

How these tests work:

- These tests can be used with children younger than 6 months.
- Your child must lie still during the test.
- The audiologist often does the tests while a child is asleep.
 - Your doctor may give your child something to make him sleep.
- These tests don't tell you what the child can hear, or will respond to. They only tell you if the ear is working. It's like checking different parts of your car but not checking to see if it really drives!

To find out what your child can really hear

Pure tone audiometry is a kind of testing where the audiologist tests to see if your child hears different tones. These are sounds with different loudness and pitch. There are 2 types of [behavioral tests](#) that give more information about what your child really hears.

- [visual reinforcement audiometry](#)
 - In this test, your child is trained to look toward a sound. When she does this, she sees a toy or flashing light.
 - For children 6 months to 2 1/2 years old.
- [conditioned play audiometry](#)
 - In this test, your child is trained to do something when she hears a sound. An example would be training your child to put a block in a box when she hears a sound.
 - For children 2 to 4 years old.

Speech audiometry is a kind of testing to see if your child hears and understands speech. The audiologist will measure 3 things:

- A threshold for speech - called the speech detection threshold
 - this is the softest speech your child can hear
 - it can be used on very young children or children who speak a different language
- Speech recognition threshold
 - this is the softest level at which your child can hear and repeat words
- Word recognition testing
 - this is the number of words (in percent) a child can identify by repeating or pointing to a picture
 - it can be done on children as young as 3 years old
 - it's given at a comfortable level of speech (louder than threshold)
 - it can measure the distortion in speech

With speech audiometry, the audiologist needs to make sure your child has the vocabulary to do the test. Otherwise, it's not a reliable test of hearing.

How these tests work:

- The audiologist does these tests when your child is awake.
- Your child must cooperate to do these tests.
- The tests try to find out what sounds your child can hear.
- If your child will wear headphones, the audiologist can test each ear separately.
- If your child won't wear headphones, sounds will be sent through speakers in the room. But this way of testing may miss a hearing loss in only 1 ear.

To see how well your child's middle ear works:

- [tympanometry](#)
 - sees how well the eardrum passes sound to the middle ear
- [acoustic reflex threshold measurement](#)
 - tests how well sound passes through the middle ear.
- [static acoustic measures](#)
 - sees if your child's eardrum is broken
 - checks if tubes in the ears are still open.

How these tests work:

- They see if anything is blocking sound from going to your child's brain.

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You can find this page online at:

<http://www.raisingdeafkids.org/hearingloss/testing/hearingtests/>