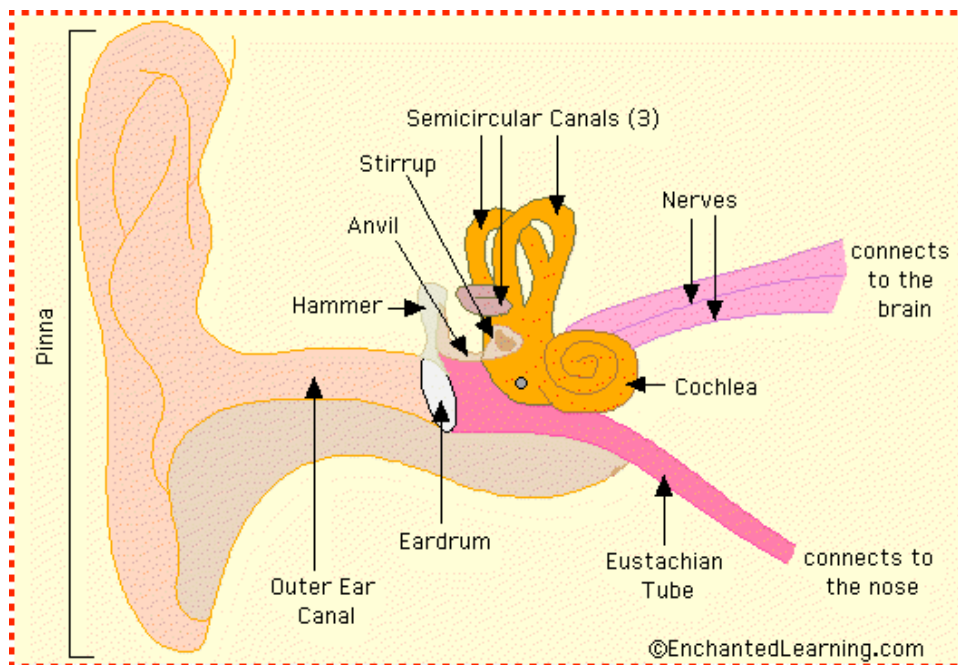


# The ABR Test

Your child is going to have a hearing test called an ABR (auditory brainstem response). The test will be done by an audiologist who is trained to perform hearing tests and help people with hearing problems. To help explain this test, let us look at how we hear.

## How we hear

The three parts of the ear work together but have different jobs. We hear well only when each part works properly.



**Outer ear** – captures the sound and funnels it down the ear

**Middle ear** – the ear drum vibrates and the bones around it make the sound louder

The Eustachian tube connects the ear to the nasal passages. This is why so many children with colds get middle-ear infections.

**Inner ear** – converts the sound wave into a signal the brain can read

## Hearing tests

Hearing tests are done for different reasons. Some children do not hear well. Other children have trouble speaking clearly or learning. Some have had problems since birth; others develop problems later. The earlier a problem is found and treated, the better the results. Your child may have had basic hearing tests. These include pure tone, speech and immittance audiometry testing. These tests show if there is a problem in the inner or middle ear.

## **The ABR test**

The ABR test shows how well the signal from the inner ear travels to the brain. It tells us how loud a sound needs to be for your child to hear it. However, the test does not tell us how well your child understands what he or she hears. If the child is to be sedated in the hospital, medications will be delivered by an anesthesiologist to ensure testing is completed.

### BASIC SEDATED ABR INSTRUCTIONS

1. The family will receive a call from the Ambulatory Services Unit and from San Francisco Otolaryngology the day prior to the procedure date giving the time and location of arrival at the hospital. (typically 1 hour before actual procedure)
2. Instructions will include feeding the child prior to the procedure:  
Clear liquids: STOP all liquids (water, apple juice, broth) **three hours** before procedure.  
Breast milk: STOP **four hours** before procedure.  
Infant formula: STOP **six hours** before procedure.  
Baby food, soft or solid food: STOP **eight hours** before procedure.
3. ANY VIOLATION OF THESE INSTRUCTIONS WILL RESULT IN IMMEDIATE CANCELLATION OF ABR PROCEDURE.

## **Getting ready for the ABR**

The audiologist will scrub the areas of skin where the ABR electrodes will be taped. This helps the electrodes make better contact with the skin. The electrodes are tiny disks that are connected by wires to a recording machine. Usually the electrodes are taped on the ear lobes, on top of the head and in the middle of the forehead. The electrodes do not put out or conduct any electricity into your child. It is important to make sure that no lotion or crème is applied to the skin 2-3 days prior to testing.

## **Having the ABR test**

The audiologist will place small earphones in your child's ears then play a variety of sounds through the earphones. If your child can hear the sounds, electrical signals will travel from the ear through your child's auditory (hearing) system. The electrodes pick up these signals and relay them along the electrode wires to the computer. The test does not cause any discomfort or pain, and the child will be sedated through the entire test.

## **After the tests**

The audiologist will explain the results to you and suggest when to return, if needed. He or she will also discuss the results with your child's doctor or referring provider. The doctor and audiologist will work with you to plan the best ways to help your child. The audiologist will send you a written copy of the results about one week after the test.

If you have any other questions or concerns, please feel free to contact the Audiology Department at 415-362-5443.