Auditory Brainstem Response (ABR) with Sedation or Anesthesia

The auditory brainstem response (ABR) is a test to see how well sound moves from the hearing nerve to the brainstem. It is used to check for hearing loss. This test is typically done on infants and children who may not be able to do other hearing tests because of age or developmental level. Your child is being referred for this test to determine how well they hear.

About the test

The parts of the body involved are the ears and the forehead. Electrodes are placed either behind or in front of each ear and on the forehead. Special earphones are placed in the ears to present the sounds. The electrodes allow the responses from the hearing nerve to be captured.

This test is safe. It does not hurt your child.

Before the test

- A day or two before the test, a nurse will call you to confirm the time and date. The nurse will also tell you what your child may eat or drink before the test.
- If your child takes medicine, the nurse will tell you which medicines you should not give before the test.

It is very important to carefully follow the instructions about not giving your child food, drink and some medicines for a certain length of time before the test. If you do not follow these instructions, the ABR may be cancelled.

Call the Pre-Admission Testing nurses at (614) 722-3850 with questions.
Your child is scheduled to receive:
☐ Light Sedation  ☐ Anesthesia

Types of sedation

- **Light sedation** is considered a “lighter sleep.” When children are under light sedation, they are unaware of their surroundings. They breathe on their own and may respond to some stimuli (such as voice commands or being touched).

- **Anesthesia** is a “deeper” sleep. While under anesthesia, children are not aware of their surroundings. They do not respond to stimuli. Some children may need different medicine to help them sleep during a sedated ABR.

Children who have any of the following health concerns may have anesthesia rather than light sedation:

- medically complex issues
- autism or aggressive behavior, such as hitting or biting (including children who cannot have an IV placed before sedation)
- history of sleep apnea
- egg allergy
- chromosome abnormalities
- difficult airways
- unrepaired heart problems
- morbidly obese (BMI greater than 35)

The day of the test (with light sedation)

- On the day of the appointment, you will go to Crossroads Registration to check in. Please arrive 90 minutes before your child’s ABR.

- After registering, you and your child will be taken to a pre-op room. You will sign a consent for the sedation after talking to the doctor.

- Your child will receive an intravenous line (IV) for sedation. An IV will be started at this time. The nurse will explain options to help your child get an IV.

- The nurse will take your child to the procedure room. **You may stay in the room for the test if you wish.**

- The nurse or doctor will give the medicine and monitor your child as they fall asleep. A nurse and doctor will stay with your child during the entire test.
The audiologist will test your child. It will take 30 to 90 minutes. After the test is complete, the audiologist will discuss the results with you.

Your child will be watched closely in the procedure room until they are awake.

After your child is awake, they may have some clear liquids. If the child can keep liquids down, they may have crackers. Your child will be watched closely until discharge.

The day of the test (with anesthesia)

On the day of the appointment, you will go to Crossroads Registration to check in. Please arrive 90 minutes before your child’s ABR.

After registering, you and your child will be taken to a pre-op room. You will sign a consent for the anesthesia after talking to the doctor. The nurse will take your child to the procedure room. You will wait in the waiting room during the test.

Your child will receive an intravenous line (IV) for sedation medication. Depending on your child, this may happen before or after your child falls asleep. The doctor will decide and explain it to you.

The nurse or doctor will give medicine to help your child fall asleep. A nurse or doctor will monitor your child and stay with them during the entire test.

The audiologist will perform the test. The test will take 30 to 90 minutes. After the test is over, your child will be moved to a post-anesthesia care unit (PACU) and watched closely until they are awake.

The audiologist will meet you in the waiting room to discuss the results with you.

After your child is awake, you will be able to see them. They may have some clear liquids. If your child can keep liquids down, they may have crackers. Your child will be watched closely until discharge.

Directions to Crossroads Registration

Enter the hospital at the Crossroads Entrance on the south side of the building (facing Livingston Avenue).

You will see the Crossroads Registration area ahead of you on the first floor, just to the right of the Crossroads elevators.

Please see the map of Nationwide Children’s Hospital main campus on Page 4. Look for the red arrow to find your way.