

WHAT IS AN AUDITORY BRAINSTEM RESPONSE TEST?

An Auditory Brainstem Response (ABR) test is a safe and painless specialized hearing test that some children need when dependable hearing results in the office cannot be obtained. It is a sleep electroencephalogram (EEG) hearing test that shows how well the hearing nerves and brain respond to sounds. It displays the softest sounds your child's ears can detect at various pitches, so we can determine how loud a sound needs to be for your child to hear it.

WHO SHOULD UNDERGO AN ABR TEST?

An ABR test is recommended for children too young for behavioral testing and/or after unsuccessful attempts have been made by an audiologist to test your child behaviorally. This includes babies that fail the newborn hearing screening and follow-up attempts, children that are too young to do a regular hearing test in a sound booth or children that are unable to participate by sitting still and following directions during a standard hearing test.

HOW TO PREPARE FOR AN ABR TEST:

- **Children younger than 5-6 months of age** can usually undergo an ABR without sedation in the office. The baby must be asleep during the entire test. To help your baby stay asleep throughout testing, you should avoid feeding your baby or allowing your baby to sleep in the hours before the test. Arrive for the test with your baby hungry and tired, and before the test begins, the audiologist will ask you to feed your baby and get your baby comfortable.
- **Children older than 5-6 months of age** must be sedated for the ABR test because any movement, including the eyes, will interfere with the test results. A sedated ABR test will be performed in the hospital as an outpatient test, meaning you will go home the same day. Because your child will be sedated, please prepare to be at the hospital for a total of 3 to 4 hours. You will receive additional instructions about fasting before the test.
- The ABR will take approximately one hour.

HOW IS AN ABR DONE?

- The test is performed by placing small earphones in your child's ears and electrodes (sensor stickers) on your child's forehead. There will be 3 small stickers on your child's head, connected to leads/wires going into a computer.
- Sounds will be presented through the earphone to each ear separately while a computer analyzes the changes in the brain wave pattern in response to sounds. If your child can hear the sounds, electrical signals will travel from the ear to the hearing nerve to the brain. The electrodes pick up these signals and relay them along the electrode wires to the computer, which shows us the results.
- To attach the electrodes during testing, your child's forehead will be scrubbed lightly, which may cause redness, but it will subside shortly after the procedure.
- The test is not painful or uncomfortable in any way, but it is necessary for your child to be asleep in order to obtain clear recordings during the test.
- **After the test, the audiologist will explain the results and recommend follow-up care. The audiologist will send you and your medical care team a written copy of the results approximately two weeks after the test.**

If you have any questions or concerns, please call our audiology department at 404-591-1884

