

# Auditory Brainstem Response Procedure (ABR)

## Purpose

This test may be performed to:

- Measure the softest sound to which the ear can respond.
- Help determine if there is a problem in the middle ear, the inner ear or the hearing nerves that go to the brain.
- Test the maturity of the auditory pathways from the ear to the brain.

## Method

Three small electrodes (discs) are taped to the head. One is located on the forehead and one behind each ear. Sounds are then presented to the ears through earphones. The sounds used in this test sound like snapping fingers. They may be presented at various intensities (loudness), usually starting at a louder level and decreasing until a response is no longer seen. In order to accurately perform this test, the child must be asleep. Generally, for patients over 5 months of age, the test is done under general anesthesia.

## Interpretation

The amount and type of hearing loss is determined from the loudness level at which responses can be measured, the time at which each wave occurs and the time between different waves in response.

The ABR test can identify hearing loss and test the function of the auditory pathways from the ear into the brain. It cannot tell us:

- What caused the hearing problem
- How patients understand the sounds they hear
- How well a person will do with a hearing aid
- How speech and language will develop

If you have any questions about this procedure, please feel free to contact the Boys Town Audiology Department at **531-355-6520**.