# ABR

*Quick Reference Guide*

## Purpose

Allows the audiologist to accurately and reliably obtain hearing levels in infants by measuring the infant's auditory response. Electrodes are placed on the infant's scalp to determine if there is electrical energy generated by the auditory nerve in response to the signal. Ideally, the baby will sleep during the test for the best results.

*Figure 1: Electrode cables with electrodes snapped on*

## Prep Materials

- Gauze pad
- Q-tip
- NuPrep (scrub material in tube)

## Testing Equipment

- ABR Machine
- Laptop computer
- 4 snap electrodes (Figure 1)
- 4 electrode cables (Figure 1)
- 2 insert earphones (Figure 2)
- 2 insert cables (Figure 2)
- Bone oscillator (Figure 3)

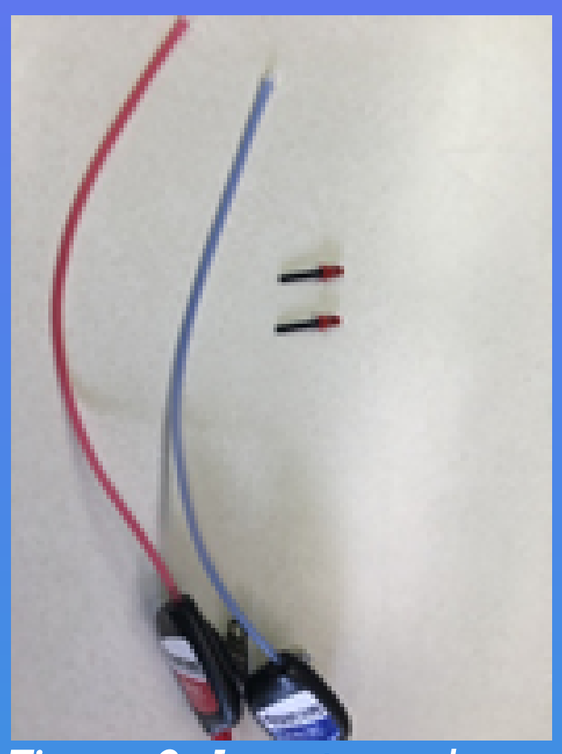

*Figure 2: Insert earphones and cables*

*Figure 3: Bone oscillator*

## How to Perform an ABR

- Swaddle baby and place baby on side or back or have parent/caregiver hold baby in swaddling position.
- Prep skin for electrodes.
  - Scrub with NuPrep paste and cotton swab. Wipe off excess paste.
  - Placement of 4 electrodes include:
    - Ground (middle forehead) (Figure 4)
    - Vertex (top, center of head; in line with ears and nose)
    - Right ear (behind right earlobe on mastoid bone) (Figure 5)
    - Left ear (behind left earlobe on mastoid bone)
    - Bone oscillator (if needed on ear-specific mastoid bone)
- Apply electrodes. Impedances should be < 5 kOhms.
- Place headphones in ears (blue: left ear, red: right ear).
- Before the audiologist begins testing, try to calm the baby.
- Best results are obtained when the infant is sleeping).

*Figure 4: Ground electrode*

*Figure 5: Right electrode*