

# University Otolaryngology

## A Patient's Guide to Audiological Testing

### **Auditory Brainstem Response Testing (ABR)**

**How long is the test?** 1 hour

**What does it test?** It tests the nerve in your ear.

**Why is this test performed?** It is performed when a patient is experiencing dizziness, ringing in one (or both) ear(s) or hearing loss that affects one ear more than the other.

**How is the test performed?** An Audiologist will measure brainwaves through sensors that are taped on your forehead and ears in response to sounds presented to your ears. This test is best performed while relaxed or sleeping.

**Pre-test instructions:** Please do not wear any facial or eye makeup for the test. This is a must!

### **Electrocochleography (ECOG)**

**How long is the test?** 1 hour

**What does it test?** It tests the functions of your inner ear.

**Why is this test performed?** This test is performed when a patient is experiencing a combination of severe episodes of dizziness, fluctuating hearing loss (usually one ear) with fullness and ringing in the involved ear.

**How is the test performed?** An audiologist will place special inserts in the ears and a sensor on the forehead which will measure electrical activity of the ear. This test is best performed when relaxed or sleeping.

**Pre-test instructions:** Please do not wear any facial or eye makeup for the test. This is a must! No caffeine or nicotine for 24 hours prior to this test.

### **Vestibular Evoked Myogenic Potentials (VEMP)**

**How long is the test?** 30 minutes to 1 hour

**What does it test?** It tests your balance system and nervous system.

**Why is this test performed?** The test is performed when a patient is experiencing dizziness, vertigo, disequilibrium or imbalance.

**How is the test performed?** An audiologist will tape sensors to your forehead, to the muscles on each side of your neck, and just below your collar bone. You will be asked to perform a task to contract your neck muscles (like turning your head in a seated position or lifting your head from a reclined position, depending upon your ability) while listening to sounds that are presented to each of your ears.

**Pre-test instructions:** Please do not wear a high-collared shirt or a turtleneck.

## University Otolaryngology A Patient's Guide to Audiological Testing - Continued

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### **Electronystagmography or Video (ENG/VNG)**

**How long is the test?** 1 hour and 15 minutes

**What does it test?** It tests your balance system.

**Why is this test performed?** The test is performed to evaluate symptoms of dizziness, vertigo (sensation of spinning), disequilibrium or imbalance.

**How is the test performed?** An Audiologist will attach sensors around the eyes (Electronystagmography) to measure eye movements, or ask you to wear goggles with video cameras (Videonystagmography) to record your eye movements.

The test consists of three parts. In the first part, you will be asked to perform various eye movements by following a lighted dot on a bar. In the second part of the test, the audiologist will test for dizziness by asking you to lie with your head turned in various positions. In the third and final part of the test, air will be placed into your ears.

- The Audiologist will explain each portion of the testing to you during the test.
- Because this test is geared to test your balance system, you may experience brief dizziness during the test.
- A “fistula” or pressure test, where mild pressure is introduced to the ear to measure for dizziness, may be added to this test if your physician suspects your dizziness may be related to pressure changes.

**Pre-test instructions:** Please do not wear any facial or eye makeup for the test. This is a must!

- Do not stop taking any of your regular medication. We only want you to stop any medication given to you by your doctor specifically for the treatment of dizziness or vertigo; such as meclizine, klonopin, antivert, Dramamine, Bonine or Benadryl. **\*\* (see note below) \*\***
- Please advise your audiologist at the time of the testing which medications you have taken within the last 24 (especially tranquilizers, sedatives or stimulants).
- Please avoid any alcoholic or caffeinated beverages 24 hours prior to testing.
- Prior to your testing you may have a light meal.

**\*\* You must consult with your prescribing physician prior to discontinuing any medications! \*\***

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## A Patient's Guide to Audiological Testing - Continued

### **Otoacoustic Emissions (OAE)**

**How long is the test?** 15 to 30 minutes

**What does it test?** It tests your inner ear functions.

**Why is this test performed?** This test provides information about subtle inner ear functions that cannot be determined from a regular hearing test. The physician may order this test for patients with ringing in the ears or a difference in hearing between ears, or to monitor for early signs of damage due to noise exposure or drugs that can damage hearing. This test can supply information about hearing for patients who are unable to complete conventional audiometric testing (e.g. young children or developmentally delayed individuals).

**How is the test performed?** A soft probe tip is placed in the ear canal and a series of tones are presented. A tiny microphone records sounds that the inner ear produces in response to special tones. Patients must be able to remain quiet and still for several minutes at a time while the test runs.

**Pre-test instructions:** There is no preparation for this test. It is helpful if infants and toddlers are sleeping when they are being tested.

### **Hearing Evaluation**

**How long is the test?** 15 to 30 minutes

**What does it test?** It tests the functions of the middle ear and hearing sensitivity

**Why is this test performed?** It is performed when hearing loss is suspected or to monitor for changes in hearing

**How is the test performed?** The Audiologist will perform a comprehensive evaluation which will include tympanometry (a "pressure test" to check eardrums) and acoustic reflex testing (middle ear muscle response to relatively loud sounds), as well as speech and pure tone testing. During the speech testing you will be asked to repeat a series of words presented at various levels. You will then be asked to respond to a series of tones representing different pitches from low to high pitches.

**Pre-test Instructions:** None

### **After Your Testing - What's Next?**

An Audiologist will analyze responses obtained during your testing and provide a report detailing the results and recommendations to your physician. Unless prior arrangements have been made, you should schedule a follow up appointment with your physician to review the results.