

Hours of Operation

Monday–Thursday,
8 a.m.–5 p.m.

Friday,
8 a.m.–4 p.m.

Electronystagmography (ENG) and Brainstem Auditory Evoked Potential (BAEP)

About your study

Your doctor has recommended that you have two diagnostic tests performed. The first is called an Electronystagmography (ENG) that is actually a series of brief tests. The second is a Brainstem Auditory Evoked Potential (BAEP). Together these two studies provide useful information about dizziness, vertigo and unsteadiness. They also help to define the anatomic location of the disorder.

The ENG is designed to look at eye movement in relation to the workings of the tiny organs that make up the inner ear. This is where balance and orientation are integrated and maintained. The BAEP looks for lesions or growths that may have developed along the auditory pathway of the inner ear.

Evaluating nerve pathways

Nerves are made up of bundles of fibers that carry electrical impulses or messages throughout the body. Impulses transmitted by the nerves to the brain from different parts of the body enable us to hear, see, feel, move, taste and smell.

A stimulus to the fibers that make up the particular area of interest is all that is needed to test these pathways. The stimulus can be anything from a small electrical pulse to a sound wave or even a simple flash of light.

Using small electrodes that are placed around the orbit of the eye, we are able to measure the changes in electrical polarity as you follow a light that travels across a screen. With small electrodes on the scalp, you will listen to audible clicks or chirps through a set of headphones. The sounds that you hear will be the stimuli used to excite the nerve fibers of the inner ear. We measure the body's response or feedback to the original stimulus.

Injury to nerves or other certain illnesses can disrupt transmission of the electrical signals. Test results indicate whether there have been interruptions or other changes in the electrical activity or nerves. This can help in the diagnosis of various injuries or disorders.

Before the test: preparation

- On the morning of your test, bathe or shower. Wash your face and scalp well to remove any body oils. Do not use any bath oil, moisturizing creams or lotions.
- Take your medications according to your regular schedule unless otherwise advised by the doctor.

- Try to eat at least four hours prior to your test. If your test is in the early morning hours, you may wish to eat your meal after the study.
- You may take all prescribed medications except vestibular suppressants. Common vestibular suppressant medicines include Antivert, Bonine, Clondine, Cyclocin or Dramamine.
- Make a list of all medications (prescription and non-prescription) that you regularly take and bring the list with you when you come for your test.

On the day of your test

When you arrive you will be taken to the neurology laboratory. The doctor or technologist will take a brief medical history, ask you questions about the problem(s) you are having and collect your list of medications.

If you have any questions about the test please do not hesitate to ask them at this time.

During the study

ENG

- **Oculomotility Study:** small electrodes will be placed around the orbit of the eye. You will be asked to focus your attention on a target light presented on a screen.
- **Positional Study:** you will be moved to a reclining table where the effects of positional head movements will be recorded.
- **Caloric Study:** from a reclining position, the inner ear will be tested using varied temperatures of water, seven degrees above and seven degrees below normal body temperature. Each ear will be irrigated twice using these water samples and the responses recorded by the computer.

BAEP

- From a reclining position you will be asked to listen to sounds through headphones. Each ear will be independently tested. It is important that you relax during this test.