

Hours of Operation

Monday–Thursday,
8 a.m.–5 p.m.

Friday,
8 a.m.–4 p.m.

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Evoked Potential Test

Your doctor has recommended that you have a diagnostic test called an Evoked Potential (EP). EP testing involves the use of specialized equipment to study the electrical activity of the nerves. Images of these impulses are displayed as wave patterns on a computer screen and are also recorded on paper tracings. The wave patterns provide important information about the conditioning and functioning of various nerve pathways to the brain.

The are three different types of EP tests

1. Brainstem Auditory Evoked Potential (BAEP) measures the nerve pathway activity from the ears to the brain.
2. Visual Evoked Potential (VEP) tests the nerve pathways from the eyes to the brain.
3. Somatosensory Evoked Potential (SSEP) tests the nerve pathways from the arms and legs to the brain.

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. EP tests measure the time it takes for electrical impulses to travel along different nerve pathways to the brain, and the time it takes the brain to recognize and respond to those signals. EP test results indicate whether there has been an interruption or other change in the electrical activity along nerve pathways, and can accurately pinpoint its location. These studies are used in the evaluation of symptoms that include numbness or weakness of the arms or legs, and difficulty with speech, vision, balance and hearing.

Before your test: preparation

- On the morning of your test, bathe or shower and wash and dry your hair thoroughly. Do not use any bath oil, moisturizing cream or lotion. Do not use any cream or oil rinse or conditioner, hair spray, gel, mousse or any other hair products.
- Take your medications according to your regular schedule unless otherwise advised by the doctor.
- Eat your normal meals before the test. You may even eat up to the time of the study.
- If you are having a Visual Evoked Potential test please bring your eyeglasses or contact lenses.

- Make a list of all medications (prescription and non-prescription) that you take regularly. Please be sure to bring this list with you when you come for your test.

On the day of your test

Upon arrival, you will be taken to the neurology laboratory where the test will be conducted and given a hospital gown to wear during your test.

The doctor or technologist will take a brief medical history (including the list of your medications) and will ask you questions about the medical problem(s) you are having. If you have any questions about the test, please do not hesitate to ask them at this time.

During the study

- Your scalp will be cleansed with a special solution to remove any remaining oils.
- Several small pads called electrodes, will be placed at different points on your scalp and skin using a special gel or paste to help them adhere properly. The electrodes will be connected by wires to the recorder that traces the electrical activity in the nerve pathways.

Brainstem Auditory Evoked Potential

- You will be sitting comfortably. Earphones will be placed over your ears. During the test you will listen through the earphones to clicking sounds while the computer measures and records the responses of your brain to the sounds. The test takes about an hour.

Visual Evoked Potential

- You will be seated in front of a computer screen. During the test you will be staring continuously at the blinking bright lights or checkerboard patterns displayed on the screen. The computer measures and records your brain responses. The test takes about an hour.

Somatosensory Evoked Potential

- You will be lying comfortably during the study. An instrument called a *stimulator* will be held against your skin, sending a minute electrical impulse through your nerve. You may feel a slight tingling sensation or twitching in your fingers or toes. The computer measures the response of your brain and spinal cord. The test takes about 90 minutes.