

# Preparing for your evoked potentials test

An evoked potentials (EP) study measure electrical activity in the brain in response to sight, sound or touch. When the brain is stimulated by sight, sound, or touch, signals travel along the nerves to the brain. There, electrodes detect the signals and display them for your doctor to interpret.

## Who performs the test?

A registered technologist with the [Canadian Board of Registration of Electroencephalograph Technologists, Inc.](#) will perform the EEG or EP test. A neurologist (someone who specializes in nervous system disorders) interprets the recordings taken from the EP and then sends the results to your doctor within one to two weeks. Your doctor may schedule an appointment to go over the test results with you.

## What types of EPs are there?

There are three types of EP tests:

- **Visual Evoked Potentials (VEP):** the patient sits before a screen on which an alternating checkerboard pattern is displayed. If you wear glasses, bring them to this procedure. Allow 30 minutes for the test.
- **Brainstem Auditory Evoked Potentials (BAEP):** the patient hears a series of clicks in each ear. Allow 30 minutes for the test.
- **Sensory Evoked Potentials (SEP):** short electrical impulses are administered to the arms or legs. Allow 1 - 1.5 hours for the test.

## How should I prepare for my EP?

- You don't need to fast for this test. You will not receive sedation.
- Tell your healthcare provider of all medicines (prescribed and over-the-counter) and herbal supplements that you are taking.
- Wash your hair the night before the test, but do not use conditioner or apply any hair products.
- Wear comfortable clothing and pants that can be rolled up past the knee.

## What should I expect during my EP?

A sensory evoked potentials test may be done on an outpatient basis or as part of your stay in a hospital. Procedures may vary depending on your condition and your healthcare provider's practices. Talk with your healthcare provider about what to expect during your test.

### General

- You will be asked to remove any clothing, jewelry, hairpins, eyeglasses, hearing aids or other metal objects that may interfere with the procedure.
- If you are asked to remove clothing, you will be given a gown to wear.
- A healthcare professional will attach the electrodes with a paste. The electrodes will be positioned depending on which type of evoked potentials test is being done.
- You will be asked to lie on a bed or relax in a chair, depending on test required.
- Once the test is complete, a healthcare professional will remove the electrodes and wash off the electrode paste. In some cases, you may need to wash your hair again at home.

### Visual evoked response

- You will be seated a few feet away from a screen.
- A healthcare professional will place electrodes on your scalp.
- You will be asked to focus your gaze on the center of the screen.

- You will then be asked to close one eye at a time while the screen displays a checkerboard pattern. The squares of the checkerboard reverse color once or twice a second.

### **Brainstem auditory evoked response**

- You will lie on a bed wearing earphones. A healthcare professional will place electrodes on top of your head and on one earlobe and then the other.
- A clicking sound or another auditory stimulus will be delivered through the earphones to the ear being tested while a "masking" noise is sent to the other ear.

### **Somatosensory evoked response**

- A healthcare professional will place electrodes on the scalp and at one or more locations on your body, such as the wrist, back of the knee or the lower back. Small electrical shocks will be delivered through the electrodes.
- For each of the tests, the electrical activity detected will be fed into a recorder. The recorder amplifies the signal and charts it so that your doctor can interpret the results.

## **What are the risks of an evoked potentials study?**

Sensory evoked potentials studies are considered safe procedures. The tests can cause a little discomfort. There may be risks depending on your specific medical condition. Be sure to discuss any concerns with your healthcare provider before the procedure

Certain factors or conditions may interfere with the results of the test. These include:

- Severe nearsightedness
- Presence of earwax or inflammation of the middle ear
- Severe hearing impairment
- Muscle spasms in the head or neck

## **How is an Evoked Potential test ordered?**

An evoked potentials test is ordered through your doctor. The doctor's office will fax a requisition to the booking office, and then the booking office will contact your doctor with a date and time for the test(s). Any changes to your appointment must be done through the booking office at 780.735.2768.