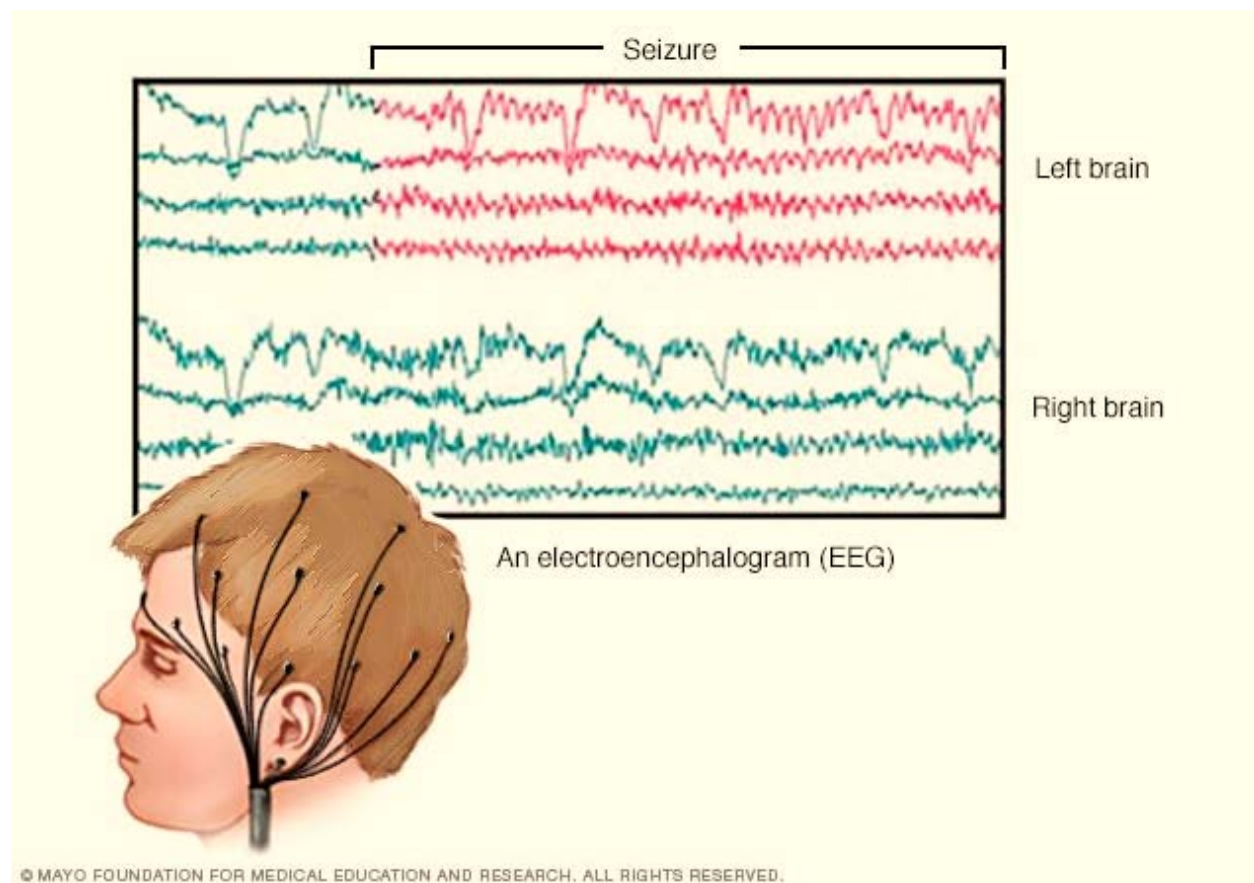


## Electroencephalography (EEG) Information Sheet

### What is an EEG?

An electroencephalogram (EEG) is a test that detects electrical activity in your brain using small metal discs (electrodes) attached to your scalp. Your brain cells communicate using electrical impulses and are active all the time, even when you're asleep. This activity shows up as wavy lines on an EEG recording. An EEG is one of the main ways we test for epilepsy. An EEG can also help diagnose other brain disorders.



### What can an EEG be used for?

An EEG can detect changes in brain activity that might be useful in diagnosing brain disorders, especially epilepsy or other seizure disorders. An EEG might also be helpful for diagnosing or treating the following:

- Brain tumors
- Brain damage from a head injury
- Problems with the brain that can have a variety of causes (encephalopathy)
- Inflammation of the brain (encephalitis)
- Stroke
- Sleep disorders

A continuous EEG is used to help find the right level of anesthesia for someone in a medically induced coma. An EEG might also be used to confirm brain death in someone in a persistent coma.

## **Are there any risks?**

EEGs are safe and painless. Sometimes seizures are triggered on purpose in people with epilepsy during the test, but appropriate medical care is provided if needed.

## **Does an EEG hurt?**

You'll feel little or no discomfort during an EEG. The electrodes don't transmit any sensations. They just record your brain waves.

## **How can I prepare for an EEG?**

### **Food and medications**

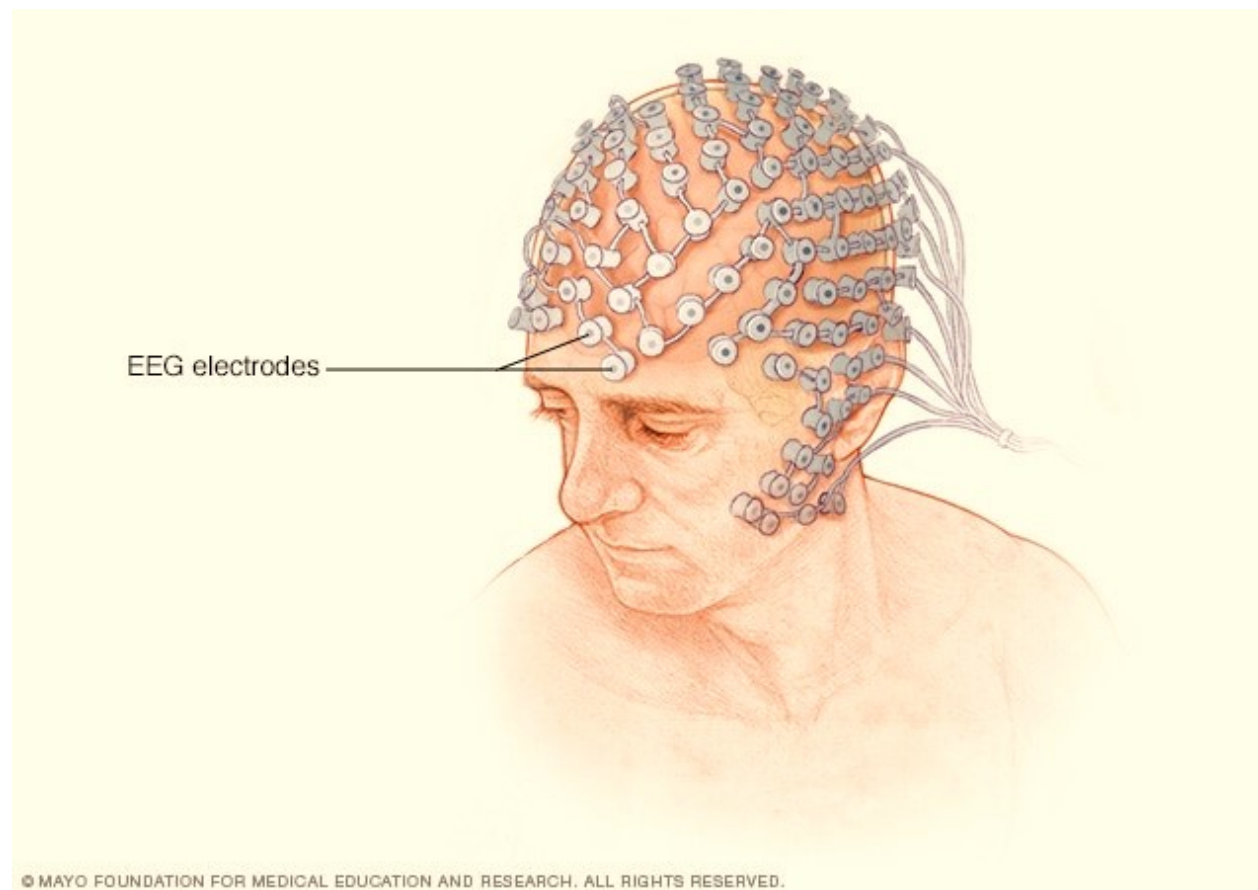
- Don't drink or eat anything with caffeine on the day of the test. Caffeine can affect the test results.
- Eat a regular meal or light snack before your EEG test. This will help stabilize your blood sugar level.
- Take your usual medications unless told otherwise.

## Washing and sleep

- Wash your hair the night before or the day of the test, but don't use conditioners, hair creams, sprays or styling gels. Hair products can make it harder for the electrodes to stick to your scalp.
- If you're supposed to sleep during your EEG test, your doctor might ask you to sleep less or not sleep at all the night before your test. Sleeping less usually means cutting how much you typically sleep in half. For example, if you typically go to sleep at 10 p.m. and wake up at 6 a.m. (eight hours total), you may be asked to go to sleep at 2 a.m. and wake up at 6 a.m. (four hours total) the night before your test.

## What can I expect?

### During the test



1. **A technician measures your head and marks your scalp** with a special pencil to show where to attach the electrodes. These spots on your scalp might be scrubbed with a gritty cream to improve the quality of the recording.
2. **A technician attaches discs (electrodes) to your scalp** using a special adhesive (glue). Sometimes, an elastic cap with electrodes on it is used instead. The electrodes are connected with wires to an instrument that makes the brain waves stronger and records them on a computer.

Once the electrodes are in place, an EEG typically takes up to 60 minutes. Testing for certain conditions requires you to sleep during the test. In that case, the test can be longer.

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***Note:** An ambulatory EEG (aEEG) is a kind of test that can be done outside an office or hospital. It can record brain activity over four hours or longer (sometimes days), which increases the chances of catching seizure activity.*

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3. **You relax in a comfortable position with your eyes closed during the test.** At various times, the technician might ask you to open and close your eyes, do some simple math, read a paragraph, look at a picture, breathe deeply for a few minutes, or look at a flashing light.
4. **A video records you during the EEG.** Your body motions are usually captured by a video camera while the EEG records your brain waves. The combination of the video and the EEG can help your doctor diagnose and treat your condition.

## **After the test**

The technician removes the electrodes or cap. If you had no sedative (medication to make you feel drowsy or help you sleep), you should feel no side effects after the procedure, You can return to your normal routine. If you have had a sedative, you may feel drowsy until the medication wears off. This would only happen if you experience a seizure during the test, which is quite rare.

## **Where will my test results go?**

After the EEG is complete, a doctor with expertise in encephalography will interpret the findings and create a report. The report will be sent to the doctor who had asked for this test on your behalf. The process usually takes no more than one week.

## **What should I do if I have questions about my EEG?**

Please contact the neurodiagnostic department at the Civic Campus (currently located in the basement, S floor, in the Neuromuscular Centre) at: 613-798-5555 ext. 14324 or the General Campus (Module Q, 2<sup>nd</sup> floor).