

# What is an EEG?

An electroencephalogram (EEG) is a test used to evaluate the electrical activity in the brain. Brain cells communicate with each other through electrical impulses. An EEG can be used to help detect potential problems associated with this activity.

An EEG tracks and records brain wave patterns. Small flat metal discs called electrodes are attached to the scalp with wires. The electrodes analyze the electrical impulses in the brain and send signals to a computer that records the results.

The electrical impulses in an EEG recording look like wavy lines with peaks and valleys. These lines allow doctors to quickly assess whether there are abnormal patterns. Any irregularities may be a sign of seizures or other brain disorders

# Why is an EEG performed?

An EEG is used to detect problems in the electrical activity of the brain that may be associated with certain brain disorders. The measurements given by an EEG are used to confirm or rule out various conditions, including:

- In patients with epilepsy
- To determine if someone is having seizure
- As part of an evaluation for memory problems

# Are there risks associated with an EEG?

There are no risks associated with an EEG. The test is painless and safe.

EEGs do include lights or and rapid breathing to help induce any abnormalities.

# What can I expect during an EEG?

An EEG measures the electrical impulses in your brain by using several electrodes that are attached to your scalp. An electrode is a conductor through which an electric current enters or leaves. The electrodes transfer information from your brain to a machine that measures and records the data.

The technician will measure your head and mark where to place the electrodes. These spots are scrubbed with a special cream that helps the electrodes get a high-quality reading.

The technician will put a sticky gel adhesive on 16 to 25 electrodes, and attach them to spots on your scalp.

You will lie on a bed and the test takes about one hour

Once the test begins, the electrodes send electrical impulse data from your brain to the recording machine. This machine converts the electrical impulses into visual patterns that appear on a screen. A computer saves these patterns.

The technician may instruct you to do certain things while the test is in progress. They may ask you to lie still, close your eyes, breathe deeply, or look at stimuli (such as a flashing light or a picture).

After the test is complete, the technician will remove the electrodes from your scalp.

During the test, very little electricity passes between the electrodes and your skin, so you'll feel very little to no discomfort.

In some instances, a person may undergo a long term monitoring. These EEGs use video to capture seizure activity. The EEG may show abnormalities even if the seizure

does not occur during the test. However, it does not always show past abnormalities related to seizure.