

What is an EEG?

EEG is short for "electroencephalogram." An EEG is a test that measures electrical activity in the brain and records brain wave patterns. Some brain conditions can cause a person's brain wave patterns to be abnormal.

Why might my doctor order an EEG? — Your doctor might order an EEG to diagnose a brain condition or get more information about a known brain condition. You might have an EEG if you:

- Have seizures – Seizures are waves of abnormal electrical activity in the brain. Seizures can make you have convulsions (sudden shaking episodes), pass out, or move or behave strangely. An EEG can give your doctor information about your seizures.
- Have a brain tumor, brain injury, sleep problems, or memory problems
- Are going to have brain surgery

A doctor might also order an EEG to check the brain activity of a person in a coma.

How do I prepare for an EEG? — To prepare for an EEG, you should:

- Wash your hair the night before your EEG with shampoo only. Don't put any conditioner, cream, or gel in your hair.
- Not eat or drink anything with caffeine in it for 8 hours beforehand.
- Follow your doctor's instructions about taking your medicines. You might need to take your usual medicines and doses. Or you might need to change your medicines.
- Follow your doctor's instructions about sleep. You might need to stay awake the night before your EEG if your doctor orders something called a "sleep-deprived EEG." If you do this, you will need to stay awake without drinking coffee or energy drinks.

What happens during an EEG? — An EEG can take place in a lab, office, or hospital.

At the start of the EEG, a technician will stick electrodes onto your scalp using paste ([figure 1](#)). Some people wear a special cap with electrodes on it instead of having electrodes put on their scalp. Wires run from the electrodes to a computer that will record your brain activity.

After the electrodes are in place, you will lie on a bed or lean back in a chair. Your doctor might give you medicine to make you sleepy. You will need to stay still and close your eyes. The technician will ask you to do different things at different times during the EEG. He or she might have you look at a flashing light, or breathe in and out deeply and quickly.

Having an EEG usually takes about an hour. Some EEGs last longer. People can have an EEG for a few hours or overnight. In some cases, a video camera will record them during their EEG. This is called a "video EEG."

Some people have an "ambulatory EEG." After the electrodes are in place, they go home wearing a portable EEG recorder. The EEG records their brain waves for a few days, or sometimes longer, while they do their usual activities.

What happens after an EEG? — After an EEG, the technician will remove the electrodes or the cap. Most people can go about their usual activities. But if your doctor gave you medicine to make you sleepy, you will feel sleepy for a while. In that case, you should have another person drive you home.

What are the downsides of an EEG? — There aren't usually any downsides to having an EEG. The procedure is painless. An EEG only gets information about the electricity that your brain makes. It does not do anything to your brain, and it cannot read your thoughts or feelings.

What should I know about the results? — You should know that an EEG doesn't always give a doctor helpful information. That's because an EEG records brain activity only for a short time.

Some people can have a normal EEG result even if they have seizures or another brain condition. Your doctor will use your EEG results along with your exam and other results to diagnose or manage your condition. If your doctor thinks that another EEG would be helpful, he or she might have you do an EEG that lasts longer.



- This drawing shows a person having an EEG (also called an electroencephalogram). An EEG is a test that measures electrical activity in the brain and records brain wave patterns.
- The electrodes are stuck onto the scalp using paste.

