

EEG Department – Patient Guide

Please bring your Health Card to your appointment. If you are employed with the military, please bring the necessary paperwork. It is also helpful to have a list of your current medications. This information is important to the electroencephalographer when interpreting your results.

We hope that the following information will help you understand more about the electroencephalogram (EEG). If you have additional concerns please feel free to contact the EEG Department at (613) 548-7835. Our office hours are Monday to Friday 0800-1600.

What is an Electroencephalogram (EEG)?

An EEG is a painless test that provides important information about the health and functioning of the brain by measuring changes in the electrical activity generated by its nerve cells. An EEG is used primarily in the evaluation of patients with seizures and those suspected of having seizures. It is also used as an indicator for brain function in metabolic disorders, head trauma, infectious diseases of the nervous system, cerebrovascular accidents and in the evaluation of organic causes of psychiatric problems. Neurologists, neurosurgeons and pediatricians use the service of the EEG department widely.

The EEG test does not measure intelligence or mental status and there is no danger of electric shock. An EEG provides information primarily on brain function but can also compliment the information gained from other tests as well.

Who will be conducting my EEG and what does it involve?

A Registered Electroencephalographic Technologist will be conducting your EEG. The procedure usually takes approximately 60 minutes but may take up to 90 minutes to complete. The technologist will explain the procedure and will have you sit or lie down to ensure that you are comfortable and relaxed. Your head will be measured and a minimum of 21 small metal discs, called electrodes, will be applied to your scalp with paste. Once the electrodes are in place, you will be asked to close your eyes while relaxing. The brain signals recorded through the electrodes are amplified and displayed on a computer as “waves”. The technologist will sit near the patient to monitor the EEG machine.

During the recording, you will be asked to keep very still as movement can obscure the recording. You may be asked to perform simple tasks such as opening and closing your eyes, taking deep breaths for a few minutes or looking at a flashing light. Once the EEG is complete, the technologist simply removes the electrodes and paste with warm water. Any residue remaining on the scalp can be washed out at home with a shampoo. There are no after effects of the EEG and you will be able to drive and continue with your normal activities.

How should I prepare for my EEG?

Preparation for the test involves washing your hair the night before to ensure that your hair is clean and dry. Any oil on the scalp will prevent the electrodes from staying on your head. Do not use conditioners or hair styling products. Hair accessories should be removed prior to the test.

You should continue taking your medication as normal, unless your physician has directed you otherwise.

It is recommended that you eat a regular meal or light snack prior to your EEG test. This will help stabilize your blood sugar level.

If a sleep deprived EEG has been ordered, your physician will instruct you to stay awake for all or a portion of the night prior to your test. For example, adults may be directed to have a nap in the evening then remain awake from midnight on. Before a sleep deprived EEG, you are to avoid having any caffeine (coffee, tea or colas). No sedatives should be taken prior to the sleep recording. A friend or relative should accompany you as it is not advisable that you drive after being sleep deprived.

Where do my results go?

After the completion of your EEG the technologist will prepare a preliminary report for the electroencephalographer to review and interpret. The technologist cannot discuss the test results with you. The final report by the electroencephalographer will be then be sent to your physician. This process usually takes no more than two weeks.

What is an Ambulatory EEG?

Ambulatory Monitoring is an EEG recorded while you are following your normal routine at home, at work or at school.

You will have an appointment at the EEG Department to be set up for the test. This involves measuring your head (as in a standard EEG) and applying 21 electrodes to your scalp with an air-dried adhesive. Your hair will not be cut and, at the end of the recording, the technologist easily removes the adhesive. Two additional electrodes are taped to your chest to monitor your heartbeat.

The electrodes will be arranged as inconspicuously as possible and are plugged into a battery operated recording device, which will be secured in a pouch at your waist. It will make the procedure much easier if you wear a front buttoning shirt. You will be completely free to move around and continue your daily activities with some minor exceptions, which the technologist will explain to you on the day of your test.

This procedure takes roughly 45 minutes to 1 hour. The technologist will give you a diary in which you will be asked to record your activities and a description of any spells that may occur. A time will be arranged for you to return to the department the next morning. At that time, it will be determined if the electrodes are to be removed or if the recording is to be continued for another day. If the electrodes are to be removed, it will take approximately 30 minutes. We use an oil-based product to dissolve the glue. We will try to clean the hair as much as possible, but it will look a little bit oily when you leave. If the recording is to be continued, you may have to wait for approximately 20 minutes while the information is downloaded from the recording device if another device is not available. If you have any questions or concerns about this test, please feel free to call the EEG Department at (613) 548-7835.

What is an Intensive Monitoring EEG?

Intensive Monitoring is a continuous Video and EEG recording while you are an inpatient in the hospital. The main application for Intensive Monitoring lies in the diagnosis and management of patients with seizures. Our goal with this type of testing is to simultaneously record the behavioural and EEG phenomena that occur when you experience symptoms.

Adult patients are scheduled to come into the hospital for this procedure on a Sunday, while pediatric patients are scheduled to come in on a Monday. The standard length of the recording is 5 days. On the date that you are scheduled for your EEG/video monitoring at KGH, you will be called by the admitting department to come into the hospital. Adults will be admitted to Kidd 7 and pediatric patients will be admitted to Kidd 10. These rooms have been specially designed for monitoring and include a ceiling mounted camera, wall plugs to send the data to the EEG lab on Connell 7, and a system to allow the nurses to control the camera from the Nurse's Station. Each room is a private room, with its own washroom.

A technologist will prepare you for the test in the EEG Department. This entails gluing 21-27 disc electrodes on the surface of your scalp. The glue is collodion and will be dried with an air hose. This method of application is necessary in order to keep the electrodes on for up to 5 days. The electrodes will be gathered at the back of your neck and plugged into a recorder box that weighs about 2 lbs. The box will be placed in a pouch that is secured on a belt at your waist. In order to change clothing during the week it is suggested that you bring only tops that button up the front. It will be very difficult to change clothes if they have to be pulled over your head. You will not be able to have a bath or shower, as the equipment has to be kept dry, but a sponge bath is feasible.

While being recorded, you will be physically connected to the machine by a long cable that connects to a wall plug. You will be able to move around in the room. We usually disconnect patients around noon on Friday but if adequate data has been recorded prior to that, you may be discharged earlier.

KGH is a completely non-smoking hospital so you will not be able to smoke during your stay in the video monitoring bed.

At some point during your admission, the medical staff may decide to reduce your anti-seizure medication or sleep deprive you for one night. These measures would be taken in order to enhance the probability of you having one of the episodes that needs to be studied.

If you have any questions about this investigation please feel free to call the Senior Technologist's office at (613) 548-6123 Monday to Friday, 0800-1600.

****Please note that the scheduled appointment date is subject to bed availability. If the bed is not available, admitting will advise you on that date and the test will be rescheduled as soon as possible****