

NIH Clinical Center Patient Education Materials

Electroencephalogram (EEG)

An electroencephalogram (EEG), also known as a brain wave test, is used to evaluate the electrical activity of the brain. This activity appears as a series of squiggles/waves called traces. Each trace corresponds to different regions of the brain. The EEG can be analyzed to help make a diagnosis or to monitor brain activity. This procedure will not harm you.

We will try our best to help you and/or your family member feel as comfortable as possible during the test. Please tell the EEG technician if you have any concerns related to obtaining past EEGs. You will be informed if sedation is needed.

Preparation

- Wash your hair with mild shampoo the night before or the day of the EEG. Do not use hair sprays, oils, or gels at least 24 hours before the test.
- If possible, eat a meal or light snack within four hours of your EEG.
- Avoid food and drinks containing caffeine at least eight hours before the test.
- Continue taking your regular medications unless your doctor tells you otherwise.
- Sometimes, the EEG gives better results when the patient has had less than the usual amount of sleep. Your doctor may ask you to stay awake for all or part of the night before your EEG.

Please arrive on time for your appointment at the EEG Laboratory located on 7SW Neuro testing in the Hatfield Clinical Center.

Procedure

- The EEG technician will measure and mark your scalp where small metal discs (electrodes) will be placed, or fit you with a special cap containing the electrodes.
- The technician will rub your scalp with a mild, scratchy cleanser that may temporarily cause a little discomfort.
- The technician will then attach the electrodes to your body with a cream or gel. They may use an adhesive to attach the discs more securely to improve the quality of the recording.
- A special instrument connected to the electrodes amplifies the brain signals and records them on computer equipment. You will not feel anything during the recording.
- Your heart and eye movements will be monitored during the procedure.
- For better results and to ensure a good recording, you will lie on a bed or in a comfortable chair.
- From time to time, the technician may ask you to open and close your eyes. The technician will instruct you to perform a breathing exercise and will shine a special light in front of your eyes.
- The entire EEG procedure usually takes about 90 minutes.

After the procedure

- The technician will remove the gel with water. Shampoo your hair to clean out any other material.
- Some patients are sensitive to the gel or cream. You may experience some mild irritation from the rubbing of the scalp.
- If you did not receive sedation, you may return to your normal activities.
- If you received sedation, it will take a little while for the medication to wear off. Arrange to have someone drive you home. You should rest the remainder of the day.
- If you have questions about the procedure, please ask. Your nurse and doctor are ready to help you at all times.

Special instructions:

This information is prepared specifically for persons taking part in clinical research at the National Institutes of Health Clinical Center and may not apply to patients elsewhere. If you have questions about the information presented here, talk to a member of your health care team. Products/resources named serve as examples and do not imply endorsement by NIH. The fact that a certain product/resource is not named does not imply that such product/resource is unsatisfactory.

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