

Let's Talk About...

EEG

(electroencephalographs)

An EEG is an electroencephalograph (e-lek-tro-en-SEF-uh-lo-graf). It is a recording of the electrical activity of the brain. The EEG provides information about the way the brain works, which may help diagnose a disease or injury and/or guide treatment.

The brain receives information, like light, sound, touch, and temperature from all parts of the body. The brain sends information to all parts of the body to help with activities like controlling breathing, controlling heart rate, and coordinating muscle activity. This information is sent by small electrical messages. Many of the brain's electrical messages also control thought and memory.

When a person is healthy, electrical messages to and from the brain make certain wave patterns. When a person is ill or injured, the electrical

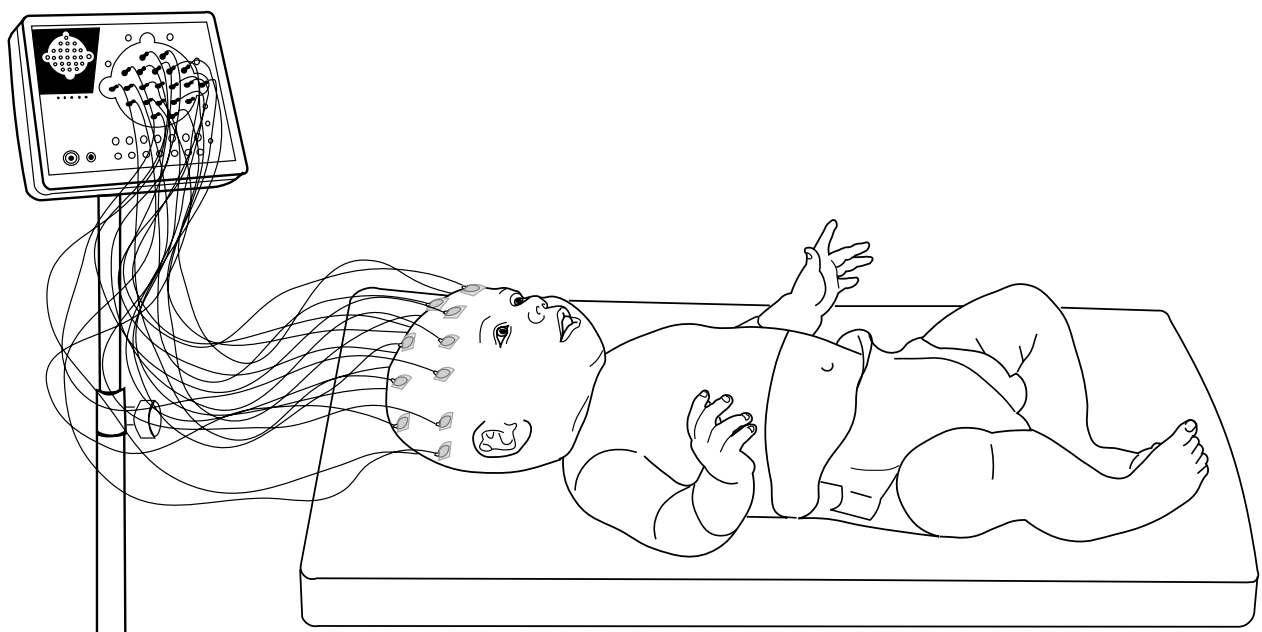
messages to or from the brain may make different wave patterns. An EEG records these messages.

How does an EEG work?

To record electrical messages, small electrodes are placed on the head. These electrodes, or discs, pick up the brain's electrical activity, which is recorded by the EEG instrument in a waveform on a computer screen. The image is stored on a computer so the doctor can look at it later.

Who performs an EEG?

A skilled EEG technician performs an EEG. Each EEG technician has knowledge of the equipment used, and concern for the children served. A doctor, called a neurologist, reads and makes sense of the EEG recording.



What happens before an EEG?

- Have your child take all prescribed medications, unless your doctor tells you to stop them.
- Do not give your child any sugar or caffeine the day of the test.
- Keep your child awake on the way to the test, and while waiting in the waiting room.

To have a complete test, it is necessary for your child to sleep during a part of the test. If your child does not sleep, the testing may not give the doctor the full information needed.

Recommendations for ways to help your child sleep during the procedure

Infants: The EEG lab will try to schedule your baby during a naptime or a time you feel your child will sleep. Please bring a diaper, bottle, pacifier, familiar blanket, pillow, or anything that may help your child relax to sleep.

Toddlers: The EEG lab will try to schedule your baby during a naptime. A familiar stuffed animal, toy, or blanket can be helpful. Keep your child awake two hours past his usual bedtime the night before, and wake him up two hours earlier than usual.

Older children (10 and over): Keep your child up well past bedtime the night before and wake him no later than 4:00 a.m. Keep them awake and active until the appointment. Some children in this age group may require even more time awake to help them be sleepy enough during the EEG.

Use of medication: For some children, it may be necessary to use medication to help them sleep so the EEG lab can get an adequate record. Special scheduling and preparation is necessary in those cases. If the office feels that your child may need to be sedated for the procedure, they will contact you and give you specific instructions.

How does the technician prepare my child for an EEG?

The EEG technician places about 32 small electrodes on the head. This usually takes 15-30 minutes.

1 To do this, the technician will first clean the parts of the head where the electrodes will be placed with a cotton-tip swab and prep cream to be sure the electrodes will stick to the scalp.

2 Next, the technician uses one of the following methods to apply the electrodes to the head.

a The technician will part the hair, and place each disc (electrode) in the part. The technician will then apply a small square of gauze around each disk and dry it with a small air hose. Note: The glue on the disc has an unpleasant odor, but is not harmful. Finally, the technician places a small amount of conductive cream under the disc through a small hole in the top of the disc.

OR

b The technician parts the hair and applies paste, which is like Vaseline®, to the disc. The technician then places the disc directly on the hair's part and presses a piece of tape, gauze or small cotton ball on the disc. The technician then wraps the head with gauze to keep the electrodes in place during the EEG.

What happens during the EEG?

You should plan about 1 to 1½ hours for a routine EEG. A part of the EEG may require your child to sleep.

During the EEG, your child is asked to do some simple tasks such as:

- Open and close the eyes.
- Repeat simple words.
- Hyperventilate (breath rapidly and deeply for 3-4 minutes)

- Respond to a flashing light placed over the child's head at several different rates of speed.
- Respond to other simple instructions and questions.

What happens after the EEG?

After the EEG, the technician will remove the discs. If paste was used, the technician gently cleans the electrode sites with a warm wet washcloth.

There will be small amounts of glue or paste left in the hair. The paste can be cleaned with soap and water, and the hair may need some combing. Glue can also be removed by brushing the hair thoroughly and by adding a small amount of baking soda to the next shampoo. It may be necessary to repeat this procedure more than once to remove all the glue.

Registration and other special instructions

If you have not been contacted before your appointment for pre-registration, report to PCMC Outpatient Registration (first floor, south end of hospital) about 20 minutes before your appointment.

If you have pre-registered, come directly to the EEG department (second floor, south end of the hospital).

If you can't keep your appointment or have any questions, call the EEG department at 801-588-3388.

Note: Emergency EEGs must take priority. Sometimes, it is necessary to delay or reschedule an appointment. The EEG staff will make every effort to keep you informed of any possible delays, and will reschedule if necessary, at your convenience.

What if I have other questions?

Call your doctor, or call the PCMC EEG department at 801-588-3388.

