Electroencephalogram (EEG)

What is an EEG?

Your brain is active all the time, and its cells communicate with each other via electrical signals. An electroencephalogram (also called an EEG) is a special test that records these electrical signals that occur within the brain

What conditions can be diagnosed using an EEG?

An EEG can be used to help diagnose and assess several conditions that affect the brain, particularly epilepsy (a condition that causes seizures). Some of the other conditions for which doctors may want to perform an EEG include:
HEAD INJURY, BRAIN TUMOUR, ENCEPHALITIS (INFLAMMATION OF THE BRAIN), STROKE, OR SLEEP DISORDERS.
Doctors can also use an EEG to confirm brain death in someone who is in a coma.

How is this test performed?

An EEG involves measuring and recording the electrical activity within your brain. To do this, usually between 16 and 25 electrodes (small, flat metal discs) need to be placed on your scalp, over different areas of your brain. The electrodes may be stuck to your scalp using a special adhesive paste, or you may wear an elastic cap that is fitted with electrodes.
The electrodes are connected to wires, which send information to an amplifier and recording device. Your brain's electrical activity is seen as a pattern of waves on the EEG machine, which can be printed on graph paper.
You will be asked to recline or lie down with your eyes closed for most of the test, and to stay as still and relaxed as possible. This is because movement and nervousness can affect the test results. You may be asked to perform a few simple tasks, such as reading, opening and closing your eyes, breathing deeply for a few minutes, or looking at a flashing light. These activities may trigger a change in the EEG pattern.

Where is an EEG usually done?

An EEG may be performed in a hospital outpatient department or a specialist doctor's rooms. If your doctor wants you to have a video EEG — where you are monitored by a video camera while the EEG is in progress — you may need to have a short hospital stay. A video EEG is useful for providing a record of your EEG pattern during the exact time of any suspected seizure activity.