



WHAT IS A SPECT SCAN?

SPECT is an abbreviation for single photon emission computed tomography. It is similar to a CT scan (which is an abbreviation for “computed tomography”).

WHAT DOES SPECT MEASURE?

SPECT measures blood flow in your brain. During a seizure, the blood flow increases in the area of the brain where the seizure begins. In between seizures the blood flow can be less than normal at the site where the seizure begins. Therefore, the blood flow measured by SPECT can assist in determining where your seizures begin.

WHAT IS AN “ICTAL SPECT” AND AN “INTERICTAL SPECT” SCAN?

During your admission, you may receive two scans: An ictal SPECT and an interictal SPECT. Both scans involve a nurse injecting a small amount of a radioactive tracer (containing a very low dose of radioactivity) into an IV in your arm. The ictal SPECT injection occurs during a seizure and an interictal SPECT injection occurs when your brain is at rest and no seizure activity is occurring. Both scans will be performed on two different days. A comparison of the ictal and interictal scans may reveal a focal area of abnormal blood flow indicating the area of your brain that your seizures are coming from.

HOW IS AN ICTAL SPECT SCAN PERFORMED?

45 seconds or less from the start of your seizure, a nurse will inject the radioactive tracer into your IV. The tracer travels to your brain and marks the area where the blood flow was increased during your seizure. The tracer does not affect your brain or cause any symptoms; you will not feel it. Within 3 hours of the injection, you will go to nuclear medicine where a SPECT scan to image the tracer in your brain is performed. During the SPECT scan, you will lie on a narrow table while a camera circles your head; the scan will take approximately 20 minutes to complete.

SAFETY CONSIDERATIONS DURING THE SPECT

In order to ensure your safety and to maximize the opportunity of receiving a high quality ictal SPECT scan, you will be asked to remain in your bed at all times between the hours of 8:00am and 2:00pm when the tracer is on the unit. A urinal or bedpan will be provided for toileting and a staff member can assist with any additional needs during this time.

CONSIDERATIONS FOR VISITORS/FAMILY MEMBERS

The radioactive tracer remains in the body for up to 24 hours after injection and is excreted through the urine, therefore it is important to not touch the IV where the tracer was injected or any bodily fluids, including blood and urine, unless gloves are worn. Also try to avoid touching the patient for 24 hours after injection.