

## **WHAT IS A SPECT SCAN?**

### **What is SPECT?**

It is an abbreviation for single photon emission computed tomography. It is similar to a CAT 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 seizures begin. Therefore, the blood flow measured by SPECT can assist in determining where your seizures begin.

### **What is an “Ictal SPECT” Scan?**

“Ictal” means seizure, so an ictal SPECT scan is one obtained while you are having a seizure.

### **How is an ictal SPECT scan performed?**

45 seconds or less from the onset of your seizure, the nurse will inject a minute amount of a radioactive tracer (containing a very low dose of radioactivity) into an I.V in your arm. 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. A SPECT scan to image the tracer in your brain is performed within 6 hours after the injection to assist in identifying your seizure focus. This is a painless procedure. You will go downstairs to Nuclear Medicine for this scan. You will lie on a narrow table while a huge camera scans your head; it takes approximately 45 – 60 minutes.

### **What is an “Interictal SPECT” scan?**

It is identical to an ictal SPECT scan, except that the injection is performed in between seizures, when your brain is at rest. The radio active tracer will be injected when no seizure activity has occurred for several hours or more. A comparison of the ictal and interictal scans may reveal a focal area of abnormal blood flow indicating the seizure focus