



**Exam Duration:** 1-2 Hours **IV Required?** Yes

**Exam Preparation:** Nothing to eat or drink 4 hours prior to appointment.  
 No caffeinated products (tea, coffee, soft drinks, chocolate, etc.) 12 hours prior to appointment.\*  
 No aminophylline 24 hours prior to appointment.\*  
 No dipyridamole (i.e. Persantine® or Aggrenox®) 48 hours prior to appointment.\*  
 No beta blockers 12-24 hours prior to appointment [treadmill only].  
 Other nuclear studies performed within 2-3 days may interfere.

\* These medications only interfere with Lexiscan chemical stress testing, but treadmill patients are encouraged to follow the preparation in the event that adequate physical stress cannot be achieved.

\* Please note that 'decaffeinated' tea and coffee products still contain caffeine and should be avoided prior to stress testing.

Nuclear Medicine myocardial perfusion scans—more commonly known as stress tests—are performed to assess coronary blood flow and ventricular function. Results of this exam include information about possible blockages in the coronary arteries, cardiac output, muscle contraction, and wall motion of the heart.

**Procedure:** Upon your arrival, a nuclear medicine technologist will explain the exam in detail and ask questions about your medical history. It may be helpful to bring a list of cardiac medications that you take. An IV will be placed in your arm and you will receive an injection of a radioactive tracer. This tracer travels to the heart muscle through the coronary arteries, allowing visualization of blood flow to the heart. After a brief wait period, the technologist will position you on the imaging table. A pair of cameras will rotate around your chest; this image may take anywhere from 8 to 16 minutes.

The second part of the exam is the stress portion. You will be taken to a nearby stress lab where a nurse will attach a 12-lead EKG to your chest and put a blood pressure cuff on your arm. Details on the different types of stress exams are listed below. After a recovery period, a second image very similar to the first will be taken and you will be free to go.

**Lexiscan (Chemical) Stress:** The most common form of stress testing involves the use of a chemical called Lexiscan. This drug simulates a stress on the heart by increasing blood flow through the coronary arteries. Common side effects of Lexiscan include flushing, increased heart rate, and shortness of breath. Less commonly, patients may experience a headache or dizziness, stomach cramping, nausea, or chest discomfort. Most side effects are short-lived and resolve within 5-10 minutes.

**Exercise Treadmill Stress:** Exercise stress testing is based on raising the heart rate to 85% of an age-predicted maximum. The procedure is simple: you will start on a treadmill walking at a slow to moderate pace and a 10 degree incline. Every 3 minutes, the treadmill will increase both speed and incline. The test continues until you reach the target heart rate or are unable to safely continue to walk.

**Notes:** Wear comfortable clothing to your appointment. As the exam requires IV access, it is best to wear a shirt that allows easy access to the arms. You will generally not be required to change into a gown for this exam.

***Please feel free to contact the Nuclear Medicine department with any questions at (405) 307-1655.***