



Cardio-Diagnostics – Myocardial Perfusion Stress Test

A **Myocardial Perfusion study** is most often performed when a patient is not able to complete a standard exercise stress test. During your test, you will either undergo pharmaceutical stress using the medication Persantine, or exercise stress on a treadmill. In both situations, you will receive an injection or a radioactive tracer called Cardiolite, which when imaged will show blood perfusion through your heart tissue (myocardium).

Your images will be acquired in the Nuclear Medicine department 60 – 90 minutes after the injection of the Cardiolite. The images taken of your heart allow physicians to visualize areas which may not get an adequate blood supply and also areas which may have been damaged due to a previous heart attack. During the 60 – 90 minute window between the injection and your images, you will be allowed to eat and drink as normal, although you will be asked to continue to abstain from caffeine consumption.

Important Note – this test takes place over two days. On Day 1, you will be administered Cardiolite during pharmaceutical stress or exercise. On Day 2, you will be administered Cardiolite at rest by a technologist and the images will be repeated. Day 2 images establish what blood perfusion in your heart looks like under normal (non-stress) conditions for comparison.

HOW SHOULD I PREPARE FOR THE TEST?

- **NO CAFFEINE** (that includes coffee, tea, sodas, and chocolate) for **24 HOURS PRIOR** to your appointment time. **If you consume caffeine within 24 hours of your test, your test be rescheduled. Only consume WATER the morning of your test, no food or beverages.**
- You should wear loose fitting clothing and shoes appropriate for exercise.
- Do not stop any medication on your own without checking with your physician.
- Between the injection and your imaging, you can eat and drink, **but you will be asked to still avoid caffeine** until images are completed.
- **If you are a diabetic**, you may have juice as needed the morning of your test to maintain safe blood sugar levels.

WHAT HAPPENS DURING THE TEST?

An **electrocardiogram (ECG)** will be taken and your blood pressure and heart rate will be checked prior to the test. ECG electrodes will be attached to your chest and wires hooked to a monitor. An intravenous line (I.V.) will be inserted in your arm, which will be used to inject the Persantine and Cardiolite into your bloodstream. This I.V. line will be removed after injection and before imaging.

During pharmaceutical stress, Persantine is used to simulate exercise. It will be administered over four minutes by a physician or a technologist under the physician's supervision. Persantine increases blood flow to the heart muscle and will be injected into the I.V. line in your arm. Your heart rate may rise and blood pressure may decrease. This is a normal response and it will be monitored along with your ECG.

Persantine may cause a flushed feeling, dizziness, palpitations or chest pain. If you experience any of these symptoms at any time during the test, immediately tell the technologist or physician so adjustments can be made. If your symptoms persist or worsen, a drug called Aminophylline can be given to reverse the side effects of persantine. **If you are asthmatic, please inform the technologist of this condition.**

During imaging, you will be asked to lie down on a special table and a gamma camera that can detect gamma rays will visualize the Cardiolite in your heart muscle. The camera is positioned close to your chest and rotates around you slowly taking pictures as it moves. Imaging takes approximately 15 – 20 minutes.

After imaging is complete, you may leave the hospital. You must return for Day 2 at a time given by a technologist or scheduling agent. The second appointment will require a repeat injection of Cardiolite followed by imaging 60 – 90 minutes after. The second set of pictures is then compared with the first by a specialized physician called a Radiologist to determine if you need further testing.

CANCELLATIONS OR RESCHEDULING

OSMH Central Scheduling requires 24 hours minimum notice of a request to cancel or reschedule an appointment

If there are any questions about your appointment, please phone 705-325-2201 ext. 3151 with a minimum 24 hours' notice

FAQS

HOW LONG WILL THE TEST LAST?

The first portion of the test lasts approximately three to four hours. You may then leave the hospital, but you must return on a second day at a time given to you by a technologist or scheduling agent. The second day lasts two to three hours.

HOW MUCH RADIATION IS INVOLVED?

The injection of cardiolite results in a radiation exposure to your body of approximately 4.2 mGy. (Gy is a unit of measurement for radiation exposure). In comparison, the amount of radiation you already receive from all naturally occurring sources (food, air, water, ground and materials) in one year is approximately 3.0 mGy.

WILL I EXPERIENCE ANYTHING FROM THE RADIATION?

The radiation you receive is not felt. However, you may briefly notice a metallic taste in your mouth for a few seconds after the injection.

HOW LONG WILL THE CARIOLITE STAY IN THE BODY?

The half-life of the radioactive tracer in Cardiolite is approximately 6 hours, within 10 half-lives or 60 hours it is very close to entirely decayed. Your body will excrete it as well, combine the two and the Cardiolite will be gone in approximately 48 hours.

CAN I CONTINUE TAKING MY HEART MEDICATIONS AFTER THE TEST?

Yes, unless instructed not to by the physician ordering the test.

WILL I BE ABLE TO DRIVE AFTER THE TEST?

Yes.

ARE THERE ANY ADVERSE REACTIONS TO CARDIOLITE?

An adverse reaction to the cardiolite is extremely, extremely rare. Some examples of these reactions are transient headaches, flushing, nausea, rash, dry mouth and hypotension (decreased blood pressure).

ARE THERE ANY CONTRA-INDICATIONS?

If you are pregnant or there is a possibility you may be, or if you are breastfeeding, a cardiolite exercise test may be inappropriate for you at this time.