



## MUGA Scan

**Procedure:** A **multiple gated acquisition** (or MUGA) scan is a test that uses a radioactive substance, called a tracer, to study how well your heart is pumping blood. During a MUGA scan, a small amount of radioactive tracer is injected into a vein in your arm. The tracer “tags” or “labels” your red blood cells by attaching to them for several hours. The MUGA scan is especially useful for assessing the size and strength of the ventricles. The most commonly reported value is the ejection fraction, which is the average amount of blood that is pumped out of the left ventricle (the main pumping chamber of the heart) with each heartbeat. The MUGA scan also provides information about heart wall motion.

### Before The Test:

- If you are scheduled for a **rest** MUGA scan, there is no special preparation.
- If you are scheduled for an **exercise** MUGA scan, you will be told not to eat, drink, or smoke for at least 3 hours before the test.
  - If you take heart medications, check with your doctor when scheduling, you may need to stop certain medications a day or two before the test.
  - Wear comfortable clothing and shoes that are suitable for exercise. Women usually a loose fitting blouse.
  - The procedure will be explained to you at the hospital and you will sign a consent form.

**Day Of The Test:** A MUGA scan is usually done in the hospital radiology or nuclear medicine department. For the rest MUGA scan several electrodes (small sticky patches) are placed on your chest and connected to an ECG, which records the electrical activity of the heart. An IV line is then inserted in the vein in your arm, and the radioactive tracer is injected into the line.

Next, you lie flat on a special table under a large scanning camera. During imaging, the camera moves slowly over your heart from different angles. During the exercise portion of the test, you are asked to lie on a table with pedals, you may be on a treadmill, or you will receive a nuclear medicine as an alternative to walking on a treadmill or pedaling on a bicycle. The nuclear medicine isotope will act as if you are exerting yourself.

Normally all areas of the left ventricle pump harder during exercise. If an area of the ventricle doesn't pump as well as it should, it may not be receiving enough blood because of a narrow or blocked artery. The exercise scan is useful in diagnosing coronary artery disease, heart failure, cardiomyopathy, and valve disease. The MUGA scan may take up to 3 hours.

**Immediately After The Test:** You can resume normal activities, and you may drive yourself home. Your doctor will discuss test results at a future office visit. The results help your doctor accurately diagnose your condition and develop the treatment plan that is best for you.

If you have any questions or concerns before the test, please feel free to call our staff at **951.369.3525**