WHAT IS A MUGA SCAN?

- How should I prepare for this test?
- What can I expect during The test?
- Answers to common questions.

WHAT IS A MUGA TEST?

The MUGA (trade name for Multi Gated Acquisition), otherwise known as a Gated blood pool study is a non-invasive test performed to evaluate the function and pumping action of the left ventricle (LV) of your heart. This helps your physician evaluate the current status of the performance of your heart muscle.

The MUGA is considered the most accurate and reproducible technique used to evaluate the LV function of your heart. The MUGA generates a number known as the EJECTION FRACTION which is a term used to describe the function of your heart. It is expressed as a percentage (%) and the normal range is 55% and above.

Common indications for MUGA scans are:
1. Assessment of LV function and size.
2. Evaluate LV function prior to Chemotherapeutic medications.
3. Re-evaluate LV function during and/or following chemotherapeutic treatments.
4. Evaluate LV function and LV motion following an acute heart attack.
5. Evaluate LV function in Cardiomyopathy and valvular diseases.

HOW SHOULD I PREPARE FOR IT?

The MUGA scan requires no specific preparations. The procedure lasts from 30 to 45 minutes. You will be informed of your schedule by your doctor's office or at the time of scheduling your appointment.

WHAT CAN I EXPECT DURING THE TEST?

The MUGA test requires a tiny arm vein intravenous which will be inserted by the nuclear cardiology technologist prior to the MUGA study being performed. The MUGA scan involves labeling a small amount of your red blood cells to an isotope known as 99m-Technetium Pertechnetate (99mTc-O4-). This allows a nuclear medicine Gamma Camera to image the circulating blood cells within the chambers of your heart.
Prior to this labeling of your red blood cells to the isotope, a liquid substance called Stannous pyrophosphate will be given through the small catheter 20 to 30 minutes prior to the labeling of your blood cells.

There are no side effects or reactions to either of these injection materials. You will be asked to sit in the waiting room for the 20 to 30 minutes prior to the MUGA scans. You will then enter the scan room and images of your heart will be taken for 20 - 30 minutes. Again, there are no side effects or painful experiences with this test.

Prior to imaging, the technologist will place three electrodes on your chest and will connect these to an EKG cable. The EKG signal allows the computer to synchronize the picture taking of your heart. Your pictures will be processed for interpretation by a physician and the written report will be sent to your doctor.

Your doctor will then explain the results to you.

**ANSWERS TO COMMON QUESTIONS**

**How long will the test last?**
45 - 60 minutes

**How much radiation is involved?**
The injection of 99mTc-Pertechnetate results in a radiation exposure to your body of approximately 3-4 mSv (Sv is a unit of measurement for radiation exposure), and will be mostly gone from the body within 1 day. In comparison, the amount of radiation you already receive from all naturally occurring sources on an annual basis from food, air, water, ground and fall out is approximately 3.0 mSv.

**Do I have to stop taking any heart medications?**
No.

**Will I be able to drive after the test?** Yes.

**Are there any adverse reactions to the Technetium Pertechnetate isotope or the Stannous ion (Sn2+) used to label the blood cell.**
No. The isotopes contain NO DYE or IODINE.

**Are there any contraindications?**
If you are pregnant or there is a possibility you may be, or if you are breast-feeding, the test may be inappropriate for you at this time.

**Will I be Enclosed within the Scanning Machine?**
No. Your head will not be placed under the machine at any time.

**YOUR APPOINTMENT INFORMATION**

**DATE:**

**TIME:**

**Directions:**

599-9th Street St. N., Suite 211
SW Corner of 6th Ave. N & Hwy.41
( west side of Hwy 41 )
in Capital Bank Bldg. - Gold Bldg.

**PHONE:** 239-263-8001