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## MYOCARDIAL PERFUSION IMAGING

**EXERCISE TREADMILL (or ADENOSINE) NUCLEAR STRESS TEST** (also referred to as a MYOCARDIAL PERFUSION STUDY, THALLIUM STRESS TEST or CARDIOLITE SCAN). This test is performed in our other office in Suite 355W of the same building.

Small sticky pads (electrodes) are placed on your upper body to obtain an electrocardiogram (ECG or EKG) and to monitor your heart rhythm continuously during the stress test. An intravenous (IV) access will be placed by a nurse or technician. If you are able to exercise, you will be shown how to use the treadmill and then you exercise on the treadmill starting at an easy and slow pace and then getting harder every few (usually three) minutes. (For those who are not able to exercise or unable to achieve a sufficiently rapid heart rate with exercise, you will be given a medicine called adenosine or occasionally Lexiscan™ [regadenoson].)

This test will take approximately 2 - 3 hours and is done in our other office in the same building on the third floor: 8635 West Third Street in Suite 355-W.

IN ORDER TO PREPARE FOR YOUR STUDY:

- **Do not eat or drink any caffeine** products (this includes not only coffee but teas, sodas, chocolate or Anacin/Excedrin) for a **full 24 hours prior** to the exam. Please note: Decaffeinated products may NOT be consumed as they often can have traces of caffeine which can interfere with getting accurate test results.
- **Do not** have anything to **eat or drink for three hours before** the exam. *Sips* of water for medications are okay but not coffee, teas, soda or juice. Regularly scheduled medicines generally should be taken unless you are specifically told not to by your doctor. Diabetics should discuss with their doctor about their diabetic medications, insulin and eating prior to the test.
- **Wear** or bring loose and **comfortable clothing** (shorts or loose-fitting clothes) **and shoes** (sneakers or walking shoes). Do not exercise for 12 hours before the test.
- You will be asked to sign a **consent** form (see below, page 3).

**PLEASE NOTE:** As this test requires us to order a special radioisotope that has to be used the same day, **a charge will be applied** if you do not show up on time or do not cancel with at least 24 hours notice. This charge is not covered by insurance and you will be responsible for the full charge except in extraordinary circumstances.

**Myocardial Perfusion** studies include:

- **Exercise Myocardial Perfusion Imaging** - for this type of exam you will need to be able to walk on a treadmill.
- **Adenosine Myocardial Perfusion Imaging** – a medication called adenosine can be substituted for exercise for those patients who cannot walk on a treadmill adequately or safely (pharmacologic stress test). If you are able to walk even very slowly on the treadmill, we still use the treadmill with adenosine to achieve better images.

In a Myocardial Perfusion study, a small amount of a short-acting radioactive material called a "tracer" or "isotope," is given to you through an IV in your arm prior to and during stress testing. The patient then lies under a special radiation detecting ("gamma") camera, to obtain information about your heart and how well it functions. Computer-generated pictures of your heart will be taken at rest and after exercise or adenosine. This material will concentrate in your heart muscle long enough for imaging but then leaves the body. The camera will allow us to visualize the blood supply to your heart muscle and observe its function before and after exercise or stress. These images allow the cardiologist to detect blockages in the coronary arteries and to determine past and potential future heart muscle damage.

Remember "exercise" can either be in the form of walking on a treadmill or medically induced by the administration of Adenosine (which dilates arteries). Because there are multiple stages to this procedure, please be prepared to be in our office for 2 - 3 hours. Also please bring a small snack with you as well for after the exercise portion. It can also be rather cool so you may need a sweater or jacket.



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## Reasons your doctor may want to perform this test

There are several reasons for your doctor to recommend Myocardial Perfusion Imaging\*:

- If you have chest pains or angina, myocardial perfusion images provide valuable information as to why you may be experiencing chest pain.
- If you have had a history of blockages in your coronary arteries or risk factors for developing these blockages, myocardial perfusion images can help the doctor see if your heart is getting adequate blood flow.
- If you are about to undergo surgery, myocardial perfusion images can help the doctor see if your heart is strong enough to withstand the stress of a long and/or complicated medical procedure.
- If you have recently experienced a heart attack, myocardial perfusion images can help your doctor determine the damage your heart suffered during the attack and whether any more heart muscle is at risk of not getting adequate blood flow.

\*While these are the most common reasons, other reasons might obviously lead to appropriate testing.

## HOW TO PREPARE FOR THE STUDY

### What to wear?

You should wear loose two-piece *comfortable clothing*. Avoid metal on your clothes like snaps or jewelry. Wear *comfortable rubber-soled or tennis shoes*, especially if you will be *walking* on the treadmill.

### Are there any special diet instructions?

- NO caffeine 24 hours prior to your nuclear study.
- NO nicotine after midnight prior to your study.
- Nothing to eat or drink after midnight if your study is before 11:00 in the morning.
- If your study is scheduled for 11:00 or later you may have a light breakfast before 7:00AM.

**Please take your usual medications unless instructed by your physician.**

**NOTE: Do not discontinue any medication without first talking with your physician.**

For more on nuclear heart scans: <http://www.cardiosmart.org/HeartDisease/CTT.aspx?id=682>

For more on stress testing:



If you have any questions about any of the above tests that your doctor has recommended for you or you are scheduled for, please feel free to call our office at (310) 659-0714.

Thank you.

**COR Medical Group, Inc.  
CV NUCLEAR**

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**INFORMATION AND CONSENT FOR EXERCISE AND/OR  
PHARMOCOLOGICAL STRESS TESTING WITH CARDIAC IMAGING**

Patient Name: \_\_\_\_\_

Date: \_\_\_\_\_

In order to determine the state of blood supply to my heart muscle, and as requested by my Doctor, I will have a heart imaging procedure using maximal exercise on a treadmill as a stimulus for increasing blood flow to the heart muscle. It will be performed on a treadmill with the amount of effort increasing gradually, until the physician present determines that the appropriate exercise has been performed. If I am unable to exercise adequately, a medication that helps increase blood flow to the heart muscle will be used as an alternative if my doctor feels that this is preferable. This might be either adenosine or Lexiscan™ (regadenoson) both of which are standard, approved intravenous heart medications. This study is performed in conjunction with injections of approved radioactive isotopes (tracers) in patients who cannot achieve an adequate level of stress through exercise or who may have contraindications for exercise stress such as abnormal heart rhythm or heart valve disease.

The exercise treadmill stress test is a tremendously useful way to assess the condition of your heart and circulatory system. It is a very routine and safe test. However, extremely rare potential complications, while highly unlikely, are possible and you should be aware of this possibility. These include (but are not limited to) irregular heart beats (arrhythmia), abnormal blood pressure, heart attack, cardiac arrest, or muscular or skeletal injuries. To minimize these risks, your electrocardiogram and overall response to the exercise will be closely monitored. Emergency equipment, a physician and trained personnel are available to deal with any situations that may arise and help insure the highest degree of safety.

If adenosine or Lexiscan™ are used, they will be administered intravenously over a period of one to seven minutes with intravenous injection of the tracers. Subsequently, a perfusion scan will be obtained in the same manner as patients who have tracers injected during exercise stress. Increased heart rate is an expected response to adenosine and Lexiscan™. In most patients, there are a few side effects. Side effects that have been observed included, but are not limited to the following: flushing-44%; chest discomfort-40%; shortness of breath-28%; headached-18%; abdominal discomfort-13%; dizziness and/or lightheadedness-12%; nervousness-2%; and low blood pressure-2%. An irregular heart rate, rhythm, or heart attack also may rarely occur-0.8 to 2.6% of the time.

I realize that although every effort will be made to keep side effects to a minimum, the side effects can be unpredictable both in nature and severity. Discontinuing the injections may reverse each of these symptoms mentioned above, and in less than 2% of the patients, theophylline may be used to reverse the side effects. During the performance of the test, emergency equipment and trained personnel are available to deal with any unusual situation that may arise.

The study has been explained to me. I have had the opportunity to discuss my questions with the medical staff and believe that I have obtained a complete explanation regarding the procedure to be performed, the medications to be administered and any potential hazards which are thought to exist. My signing of this form indicates that I have read and understand the above, feel I have had all my questions and concerns answered and agree to proceed with the test.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

Witness: \_\_\_\_\_