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Unitypoint.org/cardiologyclinic

Myocardial Perfusion Imaging

What is Myocardial Perfusion Imaging?

Myocardial perfusion imaging is an image of the blood supply to the heart muscle. Myocardial perfusion images can detect areas of inadequate blood supply to the heart muscle. This helps your doctor diagnose the presence and extent of coronary artery disease, the type of disease that causes heart attacks. The scan is made by injecting a small amount of radioactive tracer into a vein. The tracer circulates in the blood and accumulates in the heart muscle. The amount of tracer taken up by the heart muscle depends on the blood supply. The greater the blood supply, the greater the amount of the tracer in the heart muscle. Radiation from the tracer is detected by a specialized gamma camera. With the help of a computer, images of the heart can be constructed. These images show the distribution of blood to the heart muscle. From these images, the flow of blood in the coronary arteries can be determined. The radiation exposure from the study is quite minimal and causes no risk to your health. This test may include exercise on the treadmill. Exercise increases the blood flow through normal coronary arteries, but not through partially or totally blocked coronary arteries. If you are unable to walk on the treadmill due to physical limitations, your doctor may ask that the procedure be done using an intravenous medication which stimulates your heart to produce the same effect as exercise.

Special Note

If you are nursing or if you think you may be pregnant, tell your doctor before the examination. If you have a history of asthma, be sure to communicate this to your physician.

Specific Preparation:

- **Do NOT** consume caffeine products 24 hours prior to the stress exam. These include chocolate, coffee, tea, and cola/soda. This includes decaffeinated and "caffeine-free" products.
- **Do NOT** smoke or eat two (2) hours prior to the rest and stress test start times. (Water and juices are allowed.)
- **Do** wear or bring with you comfortable street clothes and a pair of walking shoes for treadmill testing. **NO** sandals.
- If you are diabetic or hypoglycemic ask your physician for special diet instructions.
- There is a break during testing where you will be asked to eat a lite meal. You may leave the building or bring a sack lunch.



Myocardial Perfusion Imaging

Appointments:

Rest Images - Date and Time:

Stress Test/Images Date and Time:

 Stop Caffeine on:

 Stop Medications on:

What Happens During the Test?

Test Length:

- Two Day Testing: 2 hours/day
- One Day Testing: 4 hours/day

Rest Images:

A dose of radioactive tracer is injected into a vein in your arm. The tracer travels throughout the body and concentrates in the heart. Rest imaging begins approximately 60 minutes after the injection and lasts approximately 10 minutes.

Stress Test/Images:

To exercise your heart, one of three possible methods will be used depending on your doctor's order.

- **Treadmill:** You will walk on the treadmill to reach a predetermined heart rate. During treadmill exercise you may experience shortness of breath, fatigue or chest discomfort. Tell the doctor, nurse or technologist if you have any symptoms. It is important to reach a maximum heart rate. Stress imaging begins shortly after the treadmill stress and lasts approximately 10 minutes.
- **Regadenoson Infusion:** A medication called Regadenoson will be given through your IV for 15 seconds. During this time, you may experience shortness of breath, chest discomfort and/or a warm flushed feeling. Tell the doctor, nurse or technologist if you feel any symptoms, they should be gone two to three minutes after stopping the medication. Stress imaging begins 60 minutes after the medication is given and lasts approximately 10 minutes.
- **Dobutamine Infusion:** A medication called Dobutamine will be given through your IV to reach a predetermined heart rate. During this time you may experience shortness of breath and feel your heart racing. Inform the doctor, nurse or technologist of any symptoms you feel. Patients who are regularly taking beta-blocker medication (i.e., Lopressor, Tenormin, etc.) should not take them for 24 hours before the exam. This should be discussed with your doctor. Stress imaging begins 60 minutes after the medication is given and lasts approximately 10 minutes.

During the "exercise phase" you will be monitored with electrocardiogram (ECG), blood pressure and oxygen monitors. Your doctor can stop the procedure at any time if more medical attention is needed.

After the Test

You may go back to your usual diet and activity after the test is finished. A cardiologist will interpret the results of the scan and send them to your doctor who will discuss the results with you.

Important Billing Information

If you are unable to keep your testing appointment, you must contact UnityPoint Health-Cardiology Clinic 24 hours prior to your test time. Scheduled testing appointments that are missed or cancelled without the 24 hour advance notice may be subject to charges for pharmaceuticals or supplies specifically ordered for your test.