

# Your heart imaging test

## What you should know

Johnstown Heart and Vascular  
Center  
(814) 619-4587

### We'll be testing your heart

The test is called **myocardial perfusion imaging (MPI)**. It's a very common test for **Coronary Artery Disease (CAD)**. Millions of people take this test every year. It can help physicians see if there's a problem with your heart **without doing any surgery**.

The heart is a specialized muscle. Like other muscles in your body, it needs oxygen and nutrients. The coronary (heart) arteries deliver oxygen and nutrients to your heart so that it can do its job of pumping blood throughout your body. People with CAD may have one or more coronary arteries that have become narrowed or blocked over time by fatty deposits (also called "plaques"). This can decrease blood flow to the heart muscle.

Reduced blood flow can cause chest pain (**angina**), shortness of breath, and possibly a heart attack. Injured heart muscle can be permanently damaged if the coronary arteries stay blocked for too long. If there is a problem, it's very important to know about it as soon as possible.



### About the MPI test

Except for a small needle (catheter) that will be placed in a vein in your arm at the start of the test, MPI is a **noninvasive test**. That means it **does not involve surgery of any kind**. You will stay awake and alert the entire time.

A small amount of radioactive liquid (called a **tracer**) will be injected into your bloodstream through the catheter during the MPI test. It is generally accepted that the benefit of the information provided by the MPI test far outweighs any risk associated with the small doses of radiation used. Therefore, *not having* the procedure done may present a higher risk than having it done.

A special camera will take pictures of your heart once the tracer moves through your arteries. These images give the doctors detailed information about blood flow into your heart. They might see that some areas of your heart are blocked and not getting all the oxygen they need. This information will give your doctors a way to decide what steps should be taken next.

Typically, you will be required to have 2 sets of images taken by the camera at 2 different times (either later that day or even the next). This is considered normal practice.



# The day of your MPI test, what to expect

## YOU WILL BE MONITORED AT ALL TIMES

Your MPI test will be done under constant supervision from a doctor with the help of at least one nuclear technologist or registered nurse. Electrocardiograph (ECG) leads will be placed on your upper body, and a blood pressure cuff will be used to check your blood pressure. These are all normal monitoring procedures during the test.

## INCREASING BLOOD FLOW TO YOUR HEART

To help the tracer move quickly through your body and to your heart, it's necessary to get more blood to flow to your heart. This can often be achieved by a special test known as "exercise stress." Usually, this means that you may be asked to walk briskly on a treadmill. As the test progresses, the exercise will become more difficult. It is important to follow the instructions provided by your doctor. Your heart imaging team will be monitoring you during your exercise stress testing and asking you questions to help them determine if the exercise level you achieve will produce good test results.

While you're exercising, you'll be given the tracer. You may be asked to keep exercising for a few more minutes. Soon after you're done exercising, you'll be moved to the special camera that will take images of your heart.



# Taking the stress test—*without* exercise

For any reason, if you are unable to exercise enough to increase blood flow to your heart, your doctor may prescribe a stress medication in place of exercise on the treadmill. This procedure is called "pharmacologic stress"—and it's used millions of times a year to help produce accurate images. Here's what to expect.

You may be lying down on a hospital cart or sitting in a chair when you receive the medication. You'll get some injections through the catheter in your arm. These include the stress medication and the tracer.

You'll feel the effects of the stress medication very quickly. These effects may include feeling flushed, chest pressure or pain, shortness of breath, or some other mild discomfort. Such effects are not uncommon, but if you're not expecting them, they may surprise you when they start. Be sure to tell the physician or lab personnel how you're feeling.

Whether you receive exercise stress or stress medication, the goal is the same: to increase blood flow to your heart so that the tracer is completely distributed throughout your heart for accurate imaging. Now you're ready for the images to be taken.



# For the doctor to get good images of your heart...

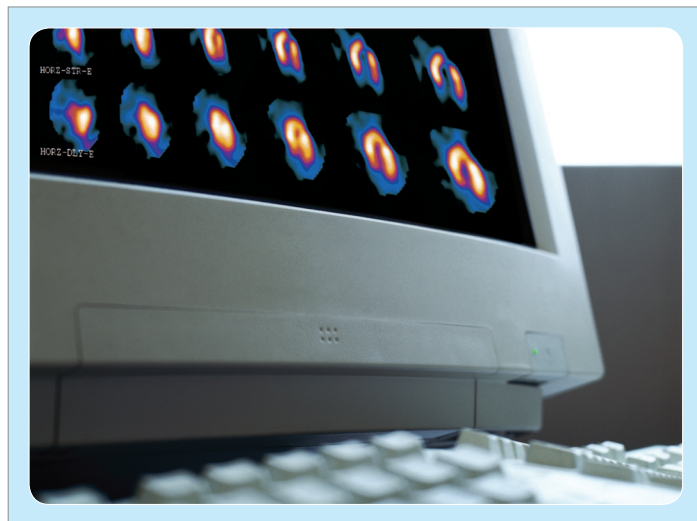
## JUST RELAX AND LIE STILL

The goal is to be sure you're as comfortable as possible during the procedure. You may still be feeling the effects of the stress medication when you're ready for the images to be taken. This is expected.

During the imaging part of the test, you'll rest on your back with your arms above your head. The camera will take images of your heart for about 20 to 40 minutes. It's very important that you're comfortable so that you can be as still as possible so that the camera can produce the images. The camera is large, but don't worry. It won't touch your body, and it doesn't hurt.

No radiation comes out of the camera. It's painless and safe, so try to remain as still as possible for the best test results.

One set of images will be taken after the treadmill exercise or after you've received the stress medication. Another set of images will be taken while you're at rest. (The at-rest images may be taken first, followed by the at-stress images. The sequence is up to the doctor.) The other set may be taken a few hours after the first set. Or even the next day. It will depend on the type of test your doctor has ordered.



## WHAT HAPPENS NEXT?

The nuclear cardiologist or radiologist will discuss the images with the doctor who ordered the test. When you meet with your doctor, you'll discuss the test results and decide what steps to take next. It may include simple lifestyle changes, medications, or even more testing.

## To get ready for the test

Be sure to read and understand the steps you should take **BEFORE** the day of your test.

- » Ask your doctor if you should follow any dietary restrictions before your test.
- » Ask your doctor if you should **STOP TAKING** any **medications** you usually take—before the day of the test.
- » If you have diabetes and use insulin or oral diabetes medications, ask your doctor for **SPECIAL INSTRUCTIONS**.
- » Tell your doctor if you have a history of wheezing, asthma, or chronic lung disease.
- » **DO NOT** consume foods, drinks, or medications that contain methylxanthines (eg, caffeine and theophylline) for at least 12 HOURS before the test. Some medications containing certain ingredients should also be avoided.
- » **DO NOT** apply creams, lotions, or powder to your chest area the day of the test.
- » **WEAR** comfortable clothing and shoes.



See the list on the next page for some products you should avoid.



## This is a partial list of what NOT to eat or drink.

Your doctor and pharmacist will know about other products, foods, drinks, and medications you can't have before your test. Be sure to tell your doctor which over-the-counter (OTC) and prescription drugs you're taking now. Your doctor will then give you instructions.

<b>Partial list of foods and drinks that should be avoided for at least 12 hours before stress testing</b>	Chocolate and cocoa products—including candies, cakes, brownies, pudding, chocolate milk, hot cocoa, etc.; coffee and tea, including brewed, instant, iced, and decaffeinated; soda pop, including those labeled "caffeine-free"; diet supplements, including energy bars, energy drinks, and products containing guarana
<b>Partial list of OTC drugs containing caffeine</b>	Anacin® (aspirin, caffeine), Excedrin® (acetaminophen, aspirin, caffeine), Vivarin® (caffeine), NoDoz® (caffeine)
<b>Partial list of prescription drugs containing caffeine</b>	Cafergot® (ergotamine tartrate, caffeine), Esgic® (butalbital, acetaminophen, caffeine), Fioricet® (butalbital, acetaminophen, caffeine), Fiorinal® (butalbital, aspirin, caffeine), Norgesic® (orphenadrine, aspirin, caffeine), Norgesic® Forte (orphenadrine, aspirin, caffeine), Synalgos®-DC (dihydrocodeine, aspirin, caffeine), Wigraine® (ergotamine, caffeine)
<b>Partial list of common prescription drugs containing theophylline</b>	Aerolate® (theophylline), Constant-T® (theophylline), Elixophylline® (theophylline), Quibron® (all forms) (theophylline), Respid® (theophylline), Slo-bid® (theophylline), Slo-Phyllin® (theophylline), T-Phyl® (theophylline), Tedral® SA (theophylline, ephedrine HCl, phenobarbital), Theo-24® (theophylline), Theoclear® (theophylline), Theo-Dur® (theophylline), Theolair® (theophylline), Theo-Organidin® (iodinated glycerol, theophylline), Theo-Sav® (theophylline), Theostat® (theophylline), Theo-X™ (theophylline)
<b>Partial list of common prescription drugs containing dipyridamole that should be withheld for 48 hours before stress testing</b>	Aggrenox® (aspirin, dipyridamole), Permole® (dipyridamole), Persantine® (dipyridamole)

NOTE: None of the above is a registered trademark of Astellas Pharma US, Inc.

## Your Test Information

Date .....	Physician .....
Time .....	Return time .....
Location .....	Special instructions .....
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.....	.....
Phone .....	.....

## The information in this booklet is only a starting point.

Be sure to talk with your physician. If you have questions, please talk with all of your healthcare providers.