

What is a Cardiac Stress Test (MPI) with Exercise?

A cardiac stress test with Myocardial Perfusion Imaging (MPI) is a non-invasive test (no surgery or cutting skin). This test takes four (4) hours and is done in three (3) parts with breaks in between each part.

This test looks at blood flow to your heart muscle during stress, like exercise, and at rest. This test helps your doctor diagnose coronary artery disease (CAD). Note: This test used to be called the “Thallium treadmill test.”

- **If you are pregnant, breastfeeding, have asthma or chronic obstructive pulmonary disease (COPD), or are taking theophylline or caffeine-containing drugs, you must talk to your doctor before the test.**
- For women weighing over 200 pounds or for men weighing over 250 pounds: pictures of your heart are taken on two (2) separate days. You schedule the second appointment on the first day of your test.

Before the Test

You get a confirmation letter by mail that tells you how to prepare for this test. **Please follow these instructions carefully.** Note: If your test is scheduled in the next 72 hours, you get more information over the phone or by email.

Prepare for the Test

- **DO NOT eat or drink 6 hours before the test except for plain drinking water:** You may drink water anytime.
- **No food or drink with caffeine for 24 hours before the test:** No coffee, tea, sodas with caffeine, or chocolate.
- **Bring the requisition form signed by your doctor** to your appointment or we may not be able to do your test.
- **About your medicines:** Check with your doctor about which of your regular medicines to take or stop before the test.
- Wear soft-soled shoes or sneakers/running shoes and comfortable, loose clothing (pants or shorts). You are asked to undress from the waist up and wear a short gown for privacy and comfort.

During the Test

Part 1: Cardiology

- Your skin is prepared with a scrubbing material (like paper or gel).
- Electrodes (thin wires) are placed on your chest to monitor your heart rhythm. A blood pressure cuff is wrapped around your arm. An intravenous (IV) line (a small plastic tube with a needle) is placed in your arm/hand.
- Next, you walk on the treadmill for as long as you can. The speed and the slope of the treadmill increase slowly. As you exercise, walking may get more difficult and your heart rate and blood pressure rise. This is normal and you are closely monitored.
- **Tell the doctor or nurse if you have chest pain or feel tired, lightheaded, or nauseous.**
- Near the end of the exercise, a small amount of a radioactive material called a "tracer" is injected into your vein. Note: Radiation exposure from this test is very small, about 700 millirads, which is about the same as from living in San Francisco for two years.
- After you reach your exercise limit, and for a short time after, your heart rhythm and blood pressure are checked.

Part 2: Nuclear Medicine

- You lie down on an "imaging" table with your arms above your head. A camera moves around your body taking pictures of your heart. It is important to lie very still and to breathe normally. This takes about 30 minutes.
- Another tracer may be put into your IV to take pictures of your heart at rest.

Part 3: Nuclear Medicine

- You need to return to Nuclear Medicine 30-90 minutes later for more pictures of your heart at rest.

After the Test

- You can eat and drink normally. Eating and drinking fluids help remove the tracer from your body.
- You can go back to your regular medicines.
- You may drive yourself home after the test.
- Return to your normal activities (for example, you may return to work).
- The results of your test are available in a few days. Please remember, it is your doctor, not the staff, who goes over your test results with you.

More Ways to Learn

- Go to www.cpmc.org/learning to learn more about heart disease.
- Visit the American Heart Association Web site at www.americanheart.org.

Frequently Asked Questions

Question: How long does the test take?

Answer: This test is done in 3 parts over four (4) hours. There are breaks between each part of the test.

Question: Can I drive home after my test?

Answer: Yes, you may drive yourself home after this test.

Question: Can I return to work after my test?

Answer: Yes, you may return to your normal activities after this test (for example, you may return to work).

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Note: This information is not meant to replace any information or personal medical advice which you get directly from your doctor(s). If you have any questions about this information, such as the risks or benefits of the treatment listed, please ask your doctor(s).