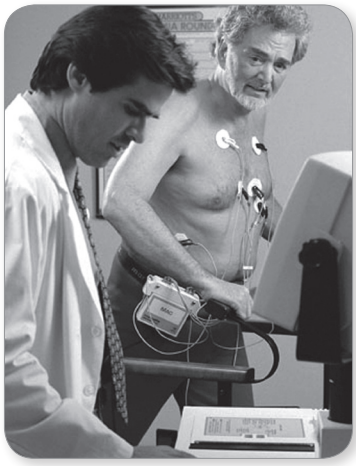
Intermountain® Healthcare

Cardiac Stress Testing

What is cardiac stress testing?

Cardiac stress tests measure the health of your heart while it is working hard. In a stress test, you exercise to increase your heart's workload, which increases the blood flowing to your heart. If you are unable to exercise, medication is used to increase the blood flow to the heart. Depending on your condition and which type of stress test you have, your heart's response is measured in various ways, which may include EKGs and imaging tests. These tests help your doctor assess blood flow to different areas of the heart muscle.



During a cardiac stress test, healthcare providers monitor your heart rate, oxygen, and blood pressure.

Why are stress tests helpful?

Cardiac stress tests can reveal problems that don't show up while your heart is at rest. Your doctor might order a stress test if you have chest pain that comes and goes, difficulty breathing, swollen ankles or feet, an irregular heart rate, tiredness, or nausea. Cardiac stress tests can reveal:

- Partial blocks in the arteries that feed your heart
- Changes in your heart's ability to pump blood
- The progress of congestive heart failure
- Heart rhythm problems that show up only when your heart is beating faster

How do I prepare?

Before your test, your healthcare provider will give you specific instructions. Here are some basic ways to prepare for a cardiac stress test:

- **Tell your doctor** about medications you are taking, including over-the-counter drugs and herbal supplements. Also tell your doctor if you are allergic to any medication.
- **Tell your doctor about any symptoms you have during exercise**, such as heart rhythm problems, nausea, chest pain, or breathing problems.

Talking with your healthcare providers about stress testing

The table below lists the most common potential benefits, risks, and alternatives for stress testing. Other benefits and risks may apply in your unique medical situation. Talking with your healthcare providers is the most important part of learning about these risks and benefits. If you have questions, be sure to ask them.

Potential benefits	Risks and potential complications	Alternatives
Stress testing can reveal information about specific heart problems, and how those problems affect your heart when it is working hard.	The risk of a serious complication is extremely low. Risks can include: • Symptoms caused by a faster heartbeat, such as chest pain, high blood pressure, irregular heartbeats, dizziness, nausea, heart attack, or sudden cardiac arrest. You will be carefully monitored during the test to prevent these symptoms or to react quickly if they occur. • Exposure to radiation, which can slightly increase your lifetime cancer risk (for more information, see Intermountain's *Guide to Understanding Radiation*). • Allergic reaction to medication that may be given if you can't exercise.	There are no other alternatives that record the specific information measured during a cardiac stress test.

- **Follow your doctor's instructions** about whether to stop certain medications or avoid eating before the test.
- **Wear comfortable clothes and walking shoes,** if exercise will be used to increase your heart rate.

What happens during a stress test?

You will be monitored. To monitor your blood pressure and the oxygen in your blood, a cuff may be placed on your arm and a clip may be put on your finger. Electrodes (sticky patches) may be put on your chest to monitor the electrical activity of your heart.

You will increase the workload on your heart. If you can exercise, you will walk on a treadmill or ride an exercise bike to make your heart work harder. If you can't exercise during a cardiac stress test, you will receive medication through an IV.

Here's what happens in each case:

- **If you exercise,** your effort will increase gradually. For example, the treadmill will start slowly. It will become faster and steeper every few minutes, until you are exercising as hard as you can or until you reach a target heart rate.
  - If you have chest pain, nausea, or just don't feel well, tell the technician. The treadmill can be stopped at any time.
  - Wait for the treadmill to stop completely before you step off it.
  - Tell the technician when you feel you can exercise for one more minute. Depending on the type of test, it might be important for your technician to know when you are almost at a stopping point.
- **If you have medication through an IV** during a cardiac stress test, here are are some things to remember:
  - The medication may make you feel like you are exercising. You may also have some minor tingling, light-headedness, headache, or nausea.
  - Tell your healthcare providers if you have chest pain, a fluttering heartbeat, trouble breathing, or sweating. They can make sure you are safe, and may be able to give you medication to reverse the symptoms.

Healthcare providers will record measurements. The types of stress tests include:

- **Electrocardiogram:** The sticky patches on your chest send signals to a machine that measures the electrical activity of your heart.
- **Stress echo:** In this case, before you exercise a technician will move a device called a **transducer** over your chest. The transducer sends sound waves that bounce back to create images of your heart. After you exercise, the technician will use the transducer again, to take images while your heart is beating hard.
- **Nuclear imaging:** A radioactive "tracer" will be injected through the IV. A special camera will record where the tracer collects in your heart. This shows the parts of your heart that have good blood flow.

What happens after the test?

After the test is finished, the arm cuff, finger clip, and electrodes will be removed. If you had an IV, it will also be removed. You can usually go home the same day.

When should I call my doctor?

Contact your doctor if you have heart symptoms after the test, such as a racing or fluttering heartbeat, chest pain, or trouble breathing.

 Patient and Provider Publications 801-442-2963 FS107 - 11/11 *Also available in Spanish.*