Intermountain® Healthcare

Echocardiogram and Stress Echo

What is an echocardiogram?

An **echocardiogram** is a test that uses high-frequency sound waves (ultrasound) to check your heart. The sound waves bounce (or "echo") off structures in your heart, and the echoes are shown as images on a monitor.

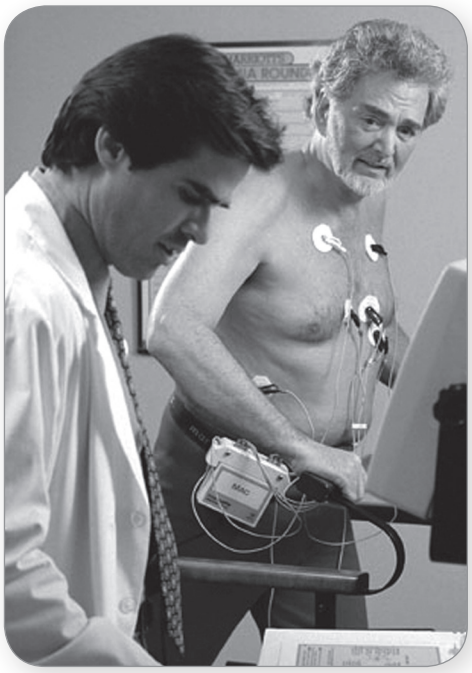
A **stress echocardiogram** compares your heart when it is at rest and when it is working hard. In this test, you have an echocardiogram, increase your heart rate, and then have a second echocardiogram while your heart is beating faster.

Why do I need it?

A standard echocardiogram shows detailed information about your heart, including:

- The size and structure of the heart chambers, and problems such as an opening in a chamber wall
- The amount of blood the heart can pump
- The structure and movement of heart valves, or the condition of an implanted artificial valve
- The condition of blood vessels
- The presence of blood clots or tumors in the heart

To test for blockages in the arteries of your heart, your doctor might order a **stress echocardiogram.**



Talking with your healthcare providers about this test

The table below lists the most common potential benefits, risks, and alternatives for an echocardiogram or stress echo. 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 as you talk with your healthcare providers, be sure to ask them.

Potential benefits	Risks and potential complications	Alternatives
An echocardiogram helps your doctor see the structures and measure the function of your heart. It's one good way to check out your heart health.	There are generally **no risks** for a **standard** echocardiogram. Risks of a **stress echo** include: • Symptoms caused by stress on your heart, such as chest pain, high blood pressure, irregular heartbeats, dizziness, nausea, or heart attack. You will be carefully monitored during the test to prevent these symptoms or to react quickly if they occur. • Allergic reaction to the medication that increases your heart rate (given if you can't exercise). This complication is extremely rare.	Other heart tests include: • EKG or Holter monitor testing • CT scan, MRI, or nuclear test

How do I prepare?

Before a standard echocardiogram, there are no preparation steps.

Before a stress echo, follow the steps below:

- **Avoid eating** for 2 to 3 hours before the test, as directed by your doctor.
- **Avoid caffeine or tobacco** for several hours before the test, as directed by your doctor.
- **Tell your doctor about medications** you are taking, including over-the-counter drugs and herbal supplements. You may need to stop some medications before the test, such as beta blockers and other heart medications.
- **Tell your doctor if you are allergic** to any medication.

What happens during a standard echo?

A standard echocardiogram usually takes 30 to 45 minutes. Here's what happens:

- **Registering:** You'll fill out some paperwork, including an informed consent form. Your doctor or the technician will explain the test — be sure to ask any questions you have.
- **Preparing:** You'll enter a room with a special exam table and ultrasound equipment. You will remove clothing above the waist, and put on a gown. Twelve electrodes will be attached to your chest to monitor your heart rate and rhythm. A cuff may be placed on your arm and a clip may be attached to your finger, to monitor your blood pressure and the oxygen in your blood.
- **Positioning:** You will lie on your left side on the table. The table might have a small section that drops down under your left side, to give the technician better access.
- **Getting views of your heart:** A small amount of gel will be placed on your chest to help pick up the high-frequency sound waves. Then a technician will move a device called a **transducer** across your chest. As the transducer sends out sound waves, the technician will capture and save images of your heart structures. The technician may ask you to breathe deeply, cough, or briefly hold your breath.

What happens during a stress echo?

A stress echo usually takes 45 to 60 minutes. Here's what happens:

- **Standard echocardiogram:** You will first have a standard echocardiogram, described at left.
- **Increasing your heart's workload:**
  - If you are able, you'll **walk on a treadmill.** It starts slowly, and becomes faster and steeper every few minutes until you reach a target heart rate. Healthcare providers will monitor your blood pressure, pulse, and other signs. If you have any symptoms or don't feel well, tell the technician — the treadmill can be stopped at any time. Wait for it to stop before you step off it.
  - If you can't exercise, you'll receive **medication** through an IV line to increase your heart rate. Tell your healthcare providers if you have any chest pain, a fluttering heartbeat, trouble breathing, or sweating.
- **A second echocardiogram:** You will have a second echocardiogram to take images of your heart while it is beating quickly.

What happens after?

- The electrodes will be taken off. If you received medication to increase your heart rate, the IV line will be removed.
- You can generally go home right away, and there is no special self-care needed at home.

When should I call my doctor?

Contact your doctor if you experience any heart symptoms after the test, such as:

- A racing or fluttering heartbeat
- Chest pain
- Shortness of breath

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