



Treadmill Stress Echocardiogram

Read this handout to learn more about a treadmill stress echocardiogram, an ultrasound exam that measures how your heart functions before and after exercising on a treadmill.

Your appointment is on

_____ (day)

_____ (date)

at _____ a.m. / p.m.

Please call the Echo Lab if you need to change this appointment: 206-598-7000 or 800-694-6895.

Welcome to the Echocardiography (Echo) Lab at University of Washington Medical Center (UWMC). We evaluate and diagnose heart disease by using ultrasound to show images of your heart.

The Echo Lab staff are experts in patient care and heart research. We will work with you and your health care provider to diagnose any heart problems you may have. This will help determine the best treatment for you.

A Treadmill Stress Echocardiogram (Echo)

A *treadmill stress echo* (TME) is a special ultrasound exam that measures how your heart functions before and after exercising on a treadmill. Ultrasound creates images of organs and other structures inside the body. It uses sound waves to produce these images.

The cardiologist or cardiac nurse will ask you to walk as long as you can on the treadmill or until your heart reaches a target heart rate that is based on your age. Exercise may bring on symptoms or problems that are not noticed when you are at rest.

On Exam Day

Important Instructions

- **Do not** eat a large meal before your exam. If you need to eat, a light meal such as a slice of toast or bagel with juice or water is OK **up to 2 hours** before the exam.
- If you must take medicines in the 2 hours before your exam, please take them with **small sips of water**, not more.
- Bring or wear comfortable clothes and shoes (running shoes or sneakers).

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Three clinic staff will be with you during your exam:

- An *electrocardiogram (ECG) technician*
- A *cardiac sonographer* (an ultrasound technologist who specializes in images of the heart)
- A *cardiologist* (heart doctor) or cardiac nurse

We will take ultrasound images (echo) of your heart before and right after you exercise.

The images of your heart will be recorded on a digital computer system. We will compare the images of your heart before and after exercise. This will help your health care provider know how well your heart responds to the extra stress of exercise.

We will ask you to read and sign a consent that gives us permission to do your treadmill stress echo exam. Before you sign this consent, the cardiologist, cardiac fellow, or cardiac nurse will explain the treadmill stress echo to you and answer any questions you have.

Why do I need this exam?

Your health care provider has asked you to have a treadmill stress echo because:

- There is some concern about the blood supply from your coronary arteries to your heart muscle.
- Or*
- A standard exercise test (without echo imaging) is not likely to give us the information we need about your heart function.

Scheduling Your Treadmill Stress Echo

- Your health care provider has asked you to have a treadmill stress echo. Allow at least 1½ hours for your exam.
- We will call to remind you of your appointment 1 or 2 days before your exam.

The Treadmill Stress Echo Exam

- After you check in, you will be asked to wait in the waiting room until someone takes you back to an exam room.
- Once you are in the exam room, we will ask you to undress from the waist up and put on a hospital gown. You do not need to remove jewelry.
- The cardiac sonographer may make marks on your chest with a felt pen. These marks show the best locations for imaging your heart.

- The ECG technician will attach a heart monitor to your chest. They may need to shave your chest hair to help make good contact with your skin. The heart monitor will be removed after your exam.

Baseline Images

- Before you exercise on the treadmill, the cardiac sonographer will ask you to lie on your left side on an exam table. The cardiac sonographer will take baseline images of your heart by holding a small sensor called a transducer on your chest.
- The transducer sends sound waves into your chest. These sound waves bounce back from your heart to make images on a monitor. The sound waves are safe and will not cause pain.
- The cardiac sonographer will put a small amount of gel on your chest to help the sound waves from the transducer penetrate into your chest. The gel may feel cool.
- At times, we may ask you to hold your breath to help get clearer images. We may apply a little pressure with the transducer to keep good contact.
- If you are uncomfortable, please let us know. We will do our best to make the exam as comfortable as possible.
- If you would like to, you will be able to watch the ultrasound images of your heart on the monitor. Please feel free to ask questions.
- UWMC is a teaching hospital. The cardiologist, cardiac fellow, cardiac nurse, or cardiac sonographer doing your exam may be assisted by other medical staff who are receiving training in echocardiography. Please do not be concerned by the discussion and teaching that may take place during your exam. We respect your privacy and your feelings, so please let us know if you feel uncomfortable.

Before the Treadmill Starts

- After the cardiac sonographer has taken the baseline images of your heart, the ECG technician will connect you to a heart monitor. The ECG technician and the cardiologist, cardiac fellow, or cardiac nurse will explain the treadmill stress procedure and review important information and precautions. Be sure to ask any questions you may still have.

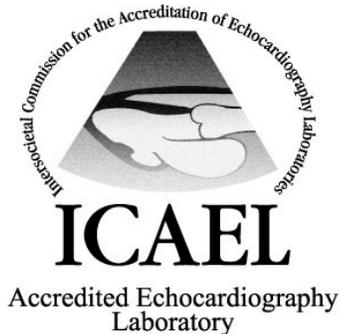
Starting the Treadmill

- When you are ready, we will start the treadmill. While you walk on the treadmill, the cardiologist, cardiac fellow, or cardiac nurse will evaluate your ECG and monitor your blood pressure, other vital signs, and symptoms.

Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns. UWMC clinic staff are also available to help.

UWMC Echo Lab:
206-598-7000



- Making your heart rate increase while we monitor your symptoms will help us understand how to best treat your heart condition. But, please tell us if you feel chest discomfort, shortness of breath, or lightheadedness during your treadmill exercise. If needed, you can stop your treadmill exam at any time.

Stopping the Treadmill

- When you have exercised all you can or have reached your target heart rate, the treadmill will be slowed and then stopped. We will ask you to **quickly** get back on the exam table and lie on your left side. We will ask you to be quick so that we can take more ultrasound images while your heart is still working hard.

This part of the exam is the most important, because it gives the cardiologist and your own health care provider the information they need about how your heart works under stress.

- After these images have been taken, you will rest on the exam table for about 10 minutes. This lets your heart slow down to its resting state.
- We will then clean the gel and marks off your chest and give you any follow-up instructions. After that, you may dress and be on your way.

Test Results

After your treadmill stress echo exam is finished, the cardiologist will review the images, the ECG *tracings* (results), and the measurements of your blood pressure and heart rate. Your health care provider who referred you for this test will receive a report from the cardiologist within 24 hours of your exam. **Your provider will talk with you about the results of your exam** at your follow-up appointment or over the phone.

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