



# Dobutamine Stress Echocardiogram

Read this handout to learn more about a dobutamine stress echocardiogram, a special ultrasound that measures how your heart works when it is under stress.

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 Dobutamine Stress Echocardiogram

A *dobutamine stress echocardiogram* (DSE) uses both a medicine (*dobutamine*) and *ultrasound* to measure how your heart works when it is under stress. Ultrasound creates images of organs and other structures inside the body. It uses sound waves to produce these images.

Dobutamine will make your heart work as if you were exercising on a treadmill. But, instead of doing physical exercise to stress your heart, you will be lying comfortably on an exam table.

We will give you dobutamine through an *intravenous* (IV) line. Your heart will pump faster as the dose of dobutamine is slowly increased. The dose will increase until your heart reaches a target heart rate that is based on your age.

We will take images of your heart with ultrasound as we give you the dobutamine. These images will show on a monitor. The *cardiologist* (a heart doctor) will review these images to learn how your heart muscle functions during stress. We will also monitor your heart rhythm on an *electrocardiogram* (ECG).

## Why do I need this exam?

Your health care provider has asked you to have a DSE because:

- There is some concern about the blood supply from your coronary arteries to your heart muscle.

*Or*

- You could not walk long enough on a treadmill to reach a high enough heart rate.

**You will be able to watch the ultrasound images of your heart displayed on a monitor, if you want to.**

## **Scheduling Your DSE**

- Your DSE has been scheduled at a convenient time for you. Allow at least 1½ hours for your exam.
- We will call you to remind you of your appointment 1 or 2 days before your exam.

## **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.
- We will ask you to sign a consent that indicates you understand the procedure and want us to continue with your DSE exam.
- Once you are in the exam room, we will ask you to undress from the waist up and put on a hospital gown. We may ask you to remove jewelry.
- We will ask you to lie on your back on the exam table. We will place ECG patches and wires on your chest to monitor your heart rhythm. We may need to shave your chest hair to help make good contact with your skin. The patches and wires will be removed after your exam.
- We will also monitor your blood pressure and blood oxygen level.
- The nurse will put a small IV in a vein in your hand or arm. The dobutamine will be given through this IV. The IV will be removed after your exam.
- Before we give you dobutamine, we will ask you to turn onto your left side.
- We will also make marks on your chest with a felt pen to mark the best place for taking images of your heart.
- The *cardiac sonographer* (an ultrasound technologist who specializes in images of the heart) will take baseline images of your heart with a small sensor called a transducer. The sonographer will hold the transducer on your chest, and the transducer will send 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 will ask you to hold your breath to help get clearer images. We may apply a little pressure with the transducer to keep good contact.
- After the cardiac sonographer has taken the baseline images of your heart, the cardiologist or cardiac nurse will explain the stress echo procedure and review important information and certain precautions. Be sure to ask any questions you may have.
- The cardiac nurse will start the dobutamine. The cardiac sonographer will begin to take more images of your heart. The amount of dobutamine you receive will slowly increase every 3 minutes. You may begin to feel your heart pump faster.
- If you are uncomfortable, please let us know. We will do our best to make your exam as comfortable as possible.
- You will be able to watch the ultrasound images of your heart on the monitor, if you want to. Please feel free to ask questions.
- The cardiologist, cardiac nurse, and cardiac sonographer will be with you during your exam. We will watch your heart function and stop the test when we have enough information.
- Be sure to tell your echo team if you:
  - Have chest discomfort or pain
  - Feel short of breath or lightheaded
  - Feel bad in any other way
- When we have enough information, the dobutamine will be stopped. We will ask you to rest on the exam table for about 10 to 15 minutes, until your heart slows to its resting state. When your heart rate has returned to baseline, the cardiac sonographer will take the last images of your heart.
- UWMC is a teaching hospital. The cardiologist, cardiology fellow (a doctor who is receiving advanced training), cardiac nurse, or cardiac sonographer doing your exam may be assisted by other medical staff who are being trained 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.

## Questions?

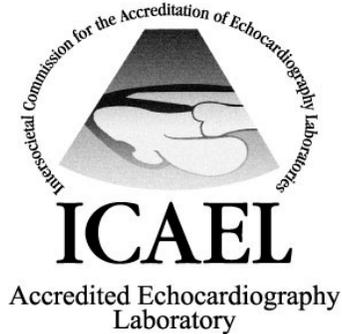
Your questions are important. Call your doctor or health care provider if you have questions or concerns. UWMC clinic staff are also available to help.

UWMC Echo Lab:  
206-598-7000

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- When your exam is done, we will:
  - Remove the IV, ECG patches, and leads monitoring your heart rhythm
  - Give you a warm washcloth to clean the gel and marks off your chest
  - Give you follow-up instructionsAfter that, you may get dressed and be on your way.

## Test Results

After your dobutamine stress echo exam, 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 the DSE 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 visit or over the phone.

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