



*Better
Together*

Patient information

Dobutamine Stress Echocardiogram

Cardiorespiratory Department

What is a Dobutamine Stress Echocardiogram (DSE)?

DSE is a diagnostic procedure, which combines the use of:

- a) An ultrasound heart scan called echocardiography.
- b) A stress test of the heart designed to be similar to normal exercise. Since many patients find exercise difficult, we use a drug called Dobutamine, which increases the heart rate and the force of its contractions in a similar way to exercise.

What are the benefits of having a DSE?

This procedure will allow your cardiologist to assess the function of your heart muscle and whether it receives an adequate blood supply under stress. It is commonly used in patients who cannot perform the standard treadmill exercise test e.g. due to painful knees, asthma, being overweight.

DSE is also useful in assessing whether certain parts of the heart are permanently damaged after a heart attack or whether some recovery is possible. In this way, the test may assist in your further management.

What are the risks of having a DSE?

Dobutamine stress echocardiography is now a routine cardiac test. The use of ultrasound for scanning is very safe and there are no known risks associated with it. Dobutamine is generally well tolerated but it may occasionally cause short-lived heart rhythm problems, chest pain or general discomfort.

As the test is performed on patients with suspected or existing coronary artery disease, there is a very small possibility of a cardiac event such as unstable angina or a heart attack.

The likelihood of serious side effects is however very low and there is a huge worldwide experience with DSE proving its safety.

Is there an alternative procedure available?

Similar information could be obtained by a heart scan using a radioactive dye. However, the DSE has the advantage of being simpler to perform and providing more comprehensive information about the heart.

What will happen if I don't have any treatment?

If you choose not to have this test, your referring doctor may be unable to find a cause for your symptoms or assess for damage to your heart muscle caused by angina or previous heart attacks. This will mean that your doctor cannot adequately treat you and your symptoms may persist.

Preparation for DSE

You do not need to wear any special clothes since exercise is not involved. Instead, you will be given medication through a drip infusion into an arm vein.

You should fast (have nothing to eat or drink) for at least four hours before the procedure.

You should check with your doctor whether you need to stop some or all your regular medication before the study. It is normal to stop some drugs such as beta-blockers 24-48 hours before the test.

How is DSE performed?

The test takes place in the Cardiorespiratory Department and lasts about 60 minutes in all. During the procedure you will be looked after by a team, which includes a cardiologist, and a technician.

You will be assisted to lie on a couch. A small plastic tube will be inserted into a vein in your hand before the procedure. This is for the infusion (drip). A probe will be positioned over your chest to obtain heart images to be seen on the machine screen. You will have some electrodes placed on your chest to allow your DSE team to monitor your heart rate and rhythm.

The Dobutamine infusion will be administered through a controlled drip infusion system according to the instructions of the doctor supervising the procedure. The rate of the infusion will be increased until your target heart rate is reached, but it will be stopped if you begin to experience chest pain or any breathlessness.

After stopping the infusion, the drug effects will start to reduce immediately and will completely resolve in about 15 minutes or less. During the test you may experience fast and bounding heart beats. This is an expected response and you should not be unduly alarmed.

Further images of your heart will be scanned at different stages of the procedure and during recovery so that a comparison can be made between them.

After the test

As soon as the team is satisfied that all the effects of the drug have worn off, you will be directed to a recovery area for about half an hour after which you can go home alone, without the need for an escort, and resume your regular activities.

Results

The results of the test will be sent to the doctor who requested the scan.

Further Information

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Please contact the secretary of your cardiologist if you have further questions via the hospital switchboard.

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