



Stress Echocardiogram

Information for Patients

Why am I having a heart test?

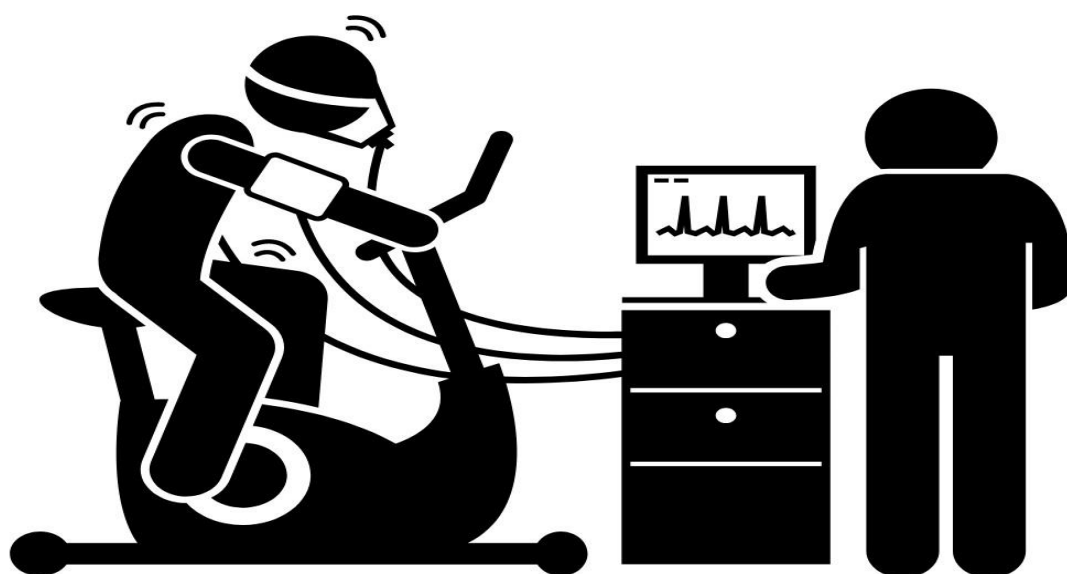
- Your Cardiologist (heart doctor) has requested an exercise/stress test to find out if the symptoms of your chest pain, breathlessness, tiredness or dizziness are happening because of a heart problem, by testing your heart during exercise.
- The stress echocardiogram can show if there are heart problems, for example narrowed heart blood vessels (coronary artery disease) which may explain your chest pain (also called “angina”). This stress test may also show other heart-related causes of breathlessness, such as narrow or leaky heart valves, which worsen on exercise.
- The stress echocardiogram uses heart ultrasound (sound waves) to make pictures of you heart at rest and then under exercise conditions.
- You might be asked to exercise on a stationary bicycle for this test. However, exercise may not be practical for some patients and in those cases, we use an intravenous medicine (into the vein) called Dobutamine to stimulate the heart and mimic the effects of exercise (making your heart beat faster).
- Unlike some heart tests that expose you to X-rays, this test only uses sound waves, so there is no radiation or X-ray exposure to you.

What happens during the stress test?

- During a stress echocardiogram you will be asked to lay down on your left side for the resting part of the study and we will take pictures of your heart.
- Next, we will take heart pictures again, but under exercise/stress conditions, using either a bicycle or an injection of Dobutamine to simulate exercise on the heart.
- If the images of your heart are fuzzy or unclear, making them difficult to read, we will, with your consent, add a **contrast agent (Sonovue or Lumnity)**. A contrast agent is an ink-like injection that ‘lights up’ the heart using microscopic bubbles to make the ultrasound pictures brighter and easier to read.
- **If you can exercise on a bicycle**, we will ask you to exercise to get your heart to reach a certain heart rate. This is to make sure that your heart works hard enough for a valid test result. We will monitor your stress echocardiogram, pulse rate and blood pressure continuously.



- **If we use Dobutamine to simulate exercise** by speeding up your heart, we will supervise you by watching your stress echocardiogram images, heart tracing electrocardiogram (ECG), pulse rate and blood pressure monitoring.
- As the test progresses you may become aware of your heart pumping faster and harder (which is not dangerous), as well as a tingling sensation.
- We may use another medicine, called **Atropine**, to speed up the heart a little more if needed.
- If there are any changes noticed by the stress ECG or your blood pressure, that worry the Doctor, they will stop the test.
- You must tell the Doctor or Physiologist (a specialist scientist of the human body physiology) immediately if you develop chest pain or feel unwell, experience shortness of breath, dizziness, or light-headedness. The test can be stopped at any time.
- Further stress echocardiogram images will be taken during the test and after the test finishes. These are taken to look for changes in the heart wall function.
- Further echocardiogram images and ECG readings will be recorded until your heart returns to its resting state.



Risks

- While every effort is made to minimise the risks, there is a small risk of complications.
- The risks are similar to the risk of you doing **any** sudden or unusual exercise, as listed below.
- The difference is that under test conditions, the amount of “exercise” your heart performs is carefully controlled and we consider any medical problems you may have.

Risks – bicycle exercise stress echocardiogram

Possible minor risks of the bicycle stress test include:

- Any heart rhythm disturbance (2 out of 100 people).
- Significant fall in blood pressure – if this happens, we can stop the test immediately at any point, to keep you safe.

Possible serious risks of the bicycle stress test include:

- Heart rhythm disturbance that requires resuscitation.
- Development of heart failure or prolonged angina (heart pain).
- Development of a myocardial infarction (heart attack).
- The risk of any of these complications is less than 1 out of 10,000 people.

Risks – Dobutamine stress echocardiogram

Possible minor risks of taking Dobutamine for the stress test include:

- Any heart rhythm disturbance (5 out of 100 people)
- Severe drop in blood pressure (4 out of 100 people)

Possible serious risks of taking Dobutamine for the stress test include:

- Serious allergic reaction to Dobutamine, Atropine or contrast (Sonovue). 1 out of 5,000 people.
- Heart rhythm disturbance requiring resuscitation (heart massage and/or electric shock)
- Development of heart failure or prolonged angina (heart pain)
- Development of a myocardial infarction (heart attack)
- The risk of resuscitation, heart failure or heart attack is approximately 2 or 3 in 10,000 tests.



- There is also a very small **risk of death** when undergoing a Dobutamine stress ECG. The chance of this happening, in the average patient, is less than 1 in 10,000. However, the risks of both complications and death may be higher in patients already known to have severe coronary artery disease.

Minor side effects of the test (9 in 100 people) may include:

- nausea
- anxiety
- tremor
- dizziness
- tingling
- headache
- urgency
- chills.

These are usually temporary and go away quickly at the end of the test.

- Please note that emergency equipment and trained staff are immediately available to deal with any complications that may arise.

Please advise staff if you have any of the following conditions:

- Very recent heart attack (within two days).
- Unstable chest pain (angina) not yet settled by medical treatment.
- Abnormal heart beats or heart valve problems causing symptoms.
- Fluid in the lungs that is not controlled by medication and is causing symptoms.
- Recent blood clots in the lungs.
- Current swelling of the heart muscle or the sac containing the heart.
- Recent tearing of the wall of the large artery (aorta).

Our Cardiology Department team will go over the details, benefits, and potential risks/side effects of the stress echocardiogram with you on the day of your test.

Please feel free to ask any questions. We will obtain your consent to do the test on the day of your appointment.

You are free to decline to have the test at any time.



You can contact the department on:

Main Switchboard Telephone 020 7272 3070
Cardiology Team Direct Line 020 7288 5290
Cardiology Email: whh-tr.csv1@nhs.net

Dr Robin Chung (Consultant Cardiologist)
Abeera Mustafa (Chief Cardiac Physiologist)

Whittington NHS Trust Cardiology Team

[Patient advice and liaison service \(PALS\)](#)

If you have a compliment, complaint or concern please contact our PALS team on 020 7288 5551 or whh-tr.PALS@nhs.net

If you need a large print, audio or translated copy of this leaflet please email whh-tr.patient-information@nhs.net. We will try our best to meet your needs.

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