



Northumbria Healthcare
NHS Foundation Trust

Stress Echocardiography

Issued by Cardiac Investigations Unit

Your doctor has decided that you should have a stress echocardiogram

What is it?

- ♥ An echocardiogram or 'echo' is a scan that uses ultrasound (sound waves) to produce pictures of the heart. The test is painless and does not use radioactivity.
- ♥ During a stress echo, you will have some pictures taken of the pumping function of your heart at rest and again under "stress".
- ♥ There are two options available to "stress" your heart. Your doctor will discuss these with you at the time of the test and decide the best method for you.
- ♥ The preferred method of "stress" is to use natural exercise to make your heart work harder and this will involve walking on a treadmill (exercise stress echo). This may not be suitable for everyone and for those patients where this is not possible we can use medication to make your heart work harder (pharmacological stress echo).

Why is it being done?

- ♥ A stress echo is performed as it allows your doctor to understand how the heart copes when it is made to work harder.
- ♥ A stress echo is useful to diagnose whether you have angina (narrowings in the coronary arteries that supply the heart with blood) or not. It can also give your doctor information about the severity of a valve problem, and it can help your doctor to decide whether your heart function will improve after treatment for coronary artery disease.

What does it involve?

- ♥ You will arrive at the hospital and check in at the Cardiac Investigations Unit, unless you have been advised to attend a different department.
- ♥ You will be taken into an examination room. Two or three people will usually be present when you have the test – a doctor, a sonographer and a nurse.
- ♥ The examination will be explained to you and you may be asked to sign a consent form to say that you are happy to proceed with the investigation.
- ♥ You will be asked to undress to the waist and put on a gown that should be left open to the front. You will be asked to lay on a couch on your left hand side.
- ♥ Stickers will be attached to your chest and connected to the machine. These will be used to monitor your heart rate. Your blood pressure will also be checked regularly throughout the test.
- ♥ You will have some ultrasound pictures taken of your heart at rest. This will involve the sonographer placing some ‘jelly’ on your chest and applying some light pressure with a small ultrasound probe. During this part of the test the lights will be lowered to darken the room.
- ♥ Once the resting pictures are obtained your heart will then be made to work harder.
- ♥ If the decision was made to use medication a drip will be put in the vein in your arm. Some ‘stress’ medicine will be infused into the drip, which makes the heart work harder. Whilst this is happening the sonographer will take pictures of your heart using an ultrasound probe gently placed on your chest.

- ♥ If your heart is to be stressed using exercise you will be asked to walk on a treadmill until your heart rate reaches its 'target' level. This level is different for everyone and the team will be able to give you more information about this and support you to achieve your target level throughout the test.
- ♥ When your heart has been made to work hard enough, the doctor will end the treadmill test or stop the medicine. The sonographer will take further images of your heart, and you will continue to be monitored until the effects of the stress medicine have worn off. This may take several minutes.
- ♥ During the test the doctor and sonographer may find that it will be beneficial to inject a contrast agent to improve the visibility of your heart. This can be administered if you are undergoing either exercise or pharmacological stress and will be administered by placing a small cannula into a vein in your arm. This agent is **not** the same contrast used in other forms of imaging such as X-Ray, CT and MRI scans and is usually well tolerated by the majority of people.
- ♥ In most cases the doctor will discuss the results of the test with you on the day.
- ♥ Overall the stress echo takes around 45 minutes to complete.

Are there any special precautions that I need to take before the Stress Echo?

- ♥ **You must NOT take beta-blocker or calcium-channel blocker tablets for 48 hours before the test (if this is a DVLA test please DO NOT take the tablets for 5 days prior to the test).** These tablets prevent the stress medicine from making the heart work harder. If you do continue with beta-blocker or calcium-channel blocker drugs, the stress echo may need to be postponed. If you have any doubts, please contact your doctors' secretary or this unit.
- ♥ You should continue other medications as usual.
- ♥ **You must NOT eat for two hours before the test, but you may drink water.**
- ♥ It is advisable to wear comfortable clothing and footwear suitable for walking on a treadmill.

Stop drugs named below:

- | | |
|---------------|----------------|
| ♥ Bisoprolol | ♥ Zemtard |
| ♥ Atenolol | ♥ Angitil |
| ♥ Metoprolol | ♥ Dilzem |
| ♥ Nebivolol | ♥ Slozem |
| ♥ Propranolol | ♥ Tildiem |
| ♥ Pindolol | ♥ Univer |
| ♥ Carvedilol | ♥ Inderal |
| ♥ Sotalol | ♥ Tenormin |
| ♥ Diltiazem | ♥ Cardicor |
| ♥ Verapamil | ♥ Nebilet |
| ♥ Adizem | ♥ Co-tenidone |
| ♥ Securon | ♥ Beta-cardone |

At the end of your stress echo

- ♥ After the echo you will occasionally be asked just to sit quietly for around 20 minutes to make sure the effects of the stress medicine have completely worn off.
- ♥ You will be able to return home after this. It is advisable that you do not drive yourself for the remainder of the day, so you may need a friend or relative to transport you.

Will I be aware of anything during the stress echo?

- ♥ The stress medicine will make your heart beat harder and faster, which you may notice.
- ♥ Occasionally the stress medicine may make you feel sick or dizzy. Let your doctor know of any symptoms you are aware of. Once the stress medicine is stopped, you will feel back to normal very quickly.

Are there any risks in having the stress echo?

- ♥ A stress echo scan is extremely safe, but there are some risks you need to be aware of.
- ♥ Uncommon (less than 1 in 100 but more than 1 in 1000), the stress medicine may make the heart develop an abnormal fast heart rhythm or cause a heart attack. If this occurs, it will often settle down by simply stopping the stress medicine, but occasionally you may need additional treatment for this.
- ♥ Very rare (less than 1 in 10,000) of a bad angina attack or a slow heart rhythm during the test.
- ♥ There is an extremely small risk (up to 1 in 1000) of developing an allergic reaction to the contrast medication.
If you have had allergic reactions to any medicine before please inform your doctor before starting the test.

Further information

- ♥ If you require further information please contact the cardiac investigations unit Monday to Friday from 8:30am - 4:30pm on:

Wansbeck General Hospital: 01670 529794

North Tyneside General Hospital: 0191 2932720

Louise Edwardson: 0191 2934175

(General enquiries and appointments)

- ♥ Further information on echocardiograms and stress echocardiograms can be found at the following web sites:

www.bhf.org.uk/information-support/tests/echocardiogram

www.nhs.uk/conditions/echocardiogram/

Alternative Formats

If you would like a copy of this information in large print, another language, audio tape or other format please call the Contact Centre on **03 44 811 8118**

Other sources of information

NHS 111

NHS Choices

www.nhs.uk/pages/homepage.aspx

NICE (National Institute for Health and Clinical Excellence)

www.nice.org.uk

Patient Advice and Liaison Service (PALS)

Freephone: **0800 032 0202**

Text: 01670 511098

Email: northoftynepals@nhct.nhs.uk

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General Enquiries **03 44 811 8111**

www.northumbria.nhs.uk

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