



What is stress echocardiography?

Stress echocardiography is an imaging method to evaluate the heart muscles and the valves during increased workload. There are certain drugs to induce coronary artery dilation and to increase the workload, such as dobutamine, dipyridamole and adenosine. Exercise stress tests are also available, which are performed on a treadmill or on a special bicycle.

Why do I need stress echocardiography?

Your physician can recommend stress echocardiography for you for different reasons:

- to confirm coronary heart disease
- to test whether a motionless or barely moving heart wall is still alive
- to evaluate cardiac valve functions
- to assess cardiac function together with symptoms and ECG changes
- to estimate the changes in pulmonary arterial pressures

How do I prepare for stress echocardiography?

- Exercise stress test: comfortable clothing, preferably trousers, is essential. If you are asthmatic, bring your inhalers with you. No fasting is needed, but do not eat too much right before the test. Beta-blockers and calcium-channel blockers should be skipped 2 days before the examination if possible. Your doctor will tell you what the medication are to skip before the test.
- Dobutamine stress test: do not eat for at least 4 hours before the test. The use of beta-blockers is generally not recommended for at least 2 days before the test.
- Dipyridamole stress test: fasting for at least 4 hours is recommended. Do not drink tea or coffee for at least 12 hours before the test.
- Adenosine stress test: dipyridamole should be discontinued for at least 24 hours before the test. Do not eat for 4 hours or drink coffee or tea for at least 12 hours before the examination.

What happens during the examination?

You will be asked to remove your clothes from your upper body, so the ECG sensor pads and echocardiography transducer can be appropriately placed on your chest.

The whole procedure will take 30–40 minutes. If you feel any discomfort or symptoms during the test, inform your physician immediately.

- Exercise stress test: the workload will be increased every 2–3 minutes. ECG is recorded during the whole test. Your blood pressure will be taken, and echocardiography will be performed several times during the test. The test will be finished at your request or if any symptoms or severe changes on the ECG/echocardiography occur.
- Dobutamine/dipyridamole/adenosine stress test: you will be lying on your side, and, after a cannula is inserted, an increasing dose of dobutamine is given intravenously. Blood pressure and ECG are recorded beside echocardiography during the test. The test will be finished when you reach the target heart rate, or it can be stopped early on your request if any problems or severe changes on the ECG/echocardiography occur.



What are the risks of stress echocardiography?

Every type of stress echocardiography is proven to be safe and well-tolerated. However, rarely some cardiac rhythm disturbances can occur. The majority of these are resolved within minutes after the discontinuation of the infusion. A life-threatening arrhythmia can occur extremely rarely, in case a specially trained team (including your examining physician) will immediately provide help.

What does the result mean, and how will it influence the further management of my disease?

The physician will examine, among others, the cardiac wall. If it remains normal during the test, severe ischemic heart disease can be excluded. If an initially still segment of the cardiac wall begins to move properly, that can mean that a coronary artery intervention would be reasonable. The change in the parameters referring to the function of the heart or valves can tell your physician about the severity of the disorder affecting your heart muscle or valves, so more personalized treatment decisions can be made.

If you have any further questions, do not hesitate to ask your physician.



Stress echocardiography

Before the examination:



No fasting is needed before exercise stress test



Comfortable clothing



Bring your inhalers if you are asthmatic



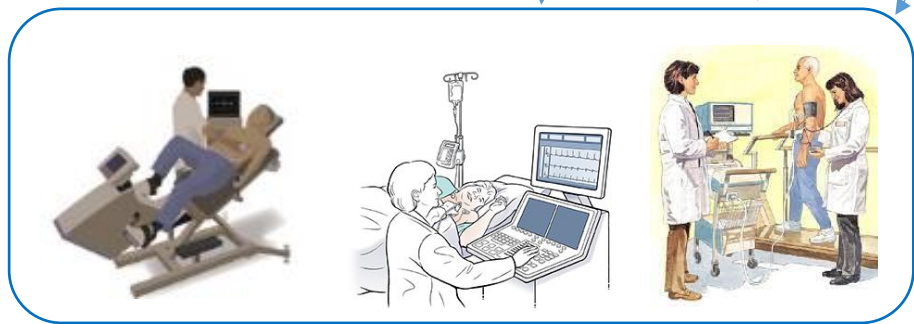
Temporarily discontinuation of your regular beta-blocker or calcium channel inhibitor calcium channel inhibitor may be recommended



No coffee or tea before dipyridamole or adenosine stress test



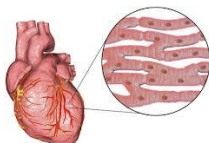
Do not eat too much before exercise stress test. Do not eat at all before pharmacologic stress test.



confirming coronary heart disease



finding ill but alive heart muscle



evaluating cardiac valve functions



assessing function to symptom



diagnosing high pulmonary artery pressures

