

**INFORMATION FOR PATIENTS:**

**Stress echocardiography  
(cardiac ultrasound with stress)**

**1. What is stress echocardiography?**

SE is an examination in which the patient is put under physical stress with medical supervision. While this stress is being applied, the cardiologists perform repeated cardiac ultrasounds. For certain issues (e.g. circulatory disorders of the coronary arteries or heart valve defects), conclusions can be drawn about the patient's status from the data extracted.

**2. How is an SE performed?**

A distinction is made between two methods for applying stress:

**A) *dynamic stress echocardiography***

In this method, stress is applied on a test table with pedals similar to those of a bicycle ergometer. However, the patient is in a resting position on their back. From this position, patient and table are tilted so that the patient is on their left side. The apparatus is adjusted to the patient's body size, including the well-padded restraints.

**b) *Dobutamine stress echocardiography***

For certain problems, and where the patient's physical capacity is limited, stress is induced via a continuous infusion with dobutamine, which makes the heart beat faster and stronger, mimicking physical stress. A cannula is inserted into a vein in the arm or hand to deliver the dobutamine. The infusion is made in increasing dosages. Often, an additional drug is used to accelerate cardiac activity (atropine).

*For both methods*, a blood pressure monitor is used alongside an ECG with adhesive electrodes. After the measurements and ultrasound examination are taken at rest, stress is applied, with little exertion to begin with. At intervals, the stress is increased, usually to the point of exhaustion. In special cases, the doctor may end the examination earlier. The patient should report symptoms as they arise while exerting themselves. It may be necessary to inject an ultrasonic contrast agent (Sonovue®) for the examination. The doctor will notify you of this separately. The examination takes about 30 minutes.

**3. How should I prepare for the examination? What should I do afterwards?**

Avoid strenuous physical activities as much as possible on the day of the examination. Eat a fairly light meal, ideally three to four hours before the examination. Please ensure you are properly hydrated. Take your medications as usual, except in case of special instructions from the examining cardiologist. If there is any doubt, ask before the examination.

If you have a *dobutamine stress echocardiography*, you should avoid driving after the examination. If this cannot be avoided, you should at least wait for some time after the examination to drive, which you will be advised about.

**4. What should I bring with me to the examination?**

**a) *dynamic stress echocardiography***

Comfortable clothes are most appropriate, ideally sporting clothes including appropriate footwear. If you need to, you can bring a drink with you. As you are given the opportunity to shower after the examination, you should bring a wash kit. Towels will be provided.

**b) *dobutamine stress echocardiography***

You do not need to bring any particular supplies with you and can wear everyday clothes.

**5. Are there risks involved in stress echocardiography?**

Any strenuous activity entails a (very low) risk of serious incident such as a heart attack. In dobutamine stress echocardiography, the risk is slightly higher. Complications can also arise from the medications, which are also only rarely dangerous. In order to minimise these risks, please follow the advice under 9. All preparations have been made for immediate treatment should such an incident occur.

**6. Date of examination:**

\_\_\_ / \_\_\_ / 20\_\_\_ : \_\_\_

**7. Location of examination:**

Center Hospitalier du Nord  
120, Avenue Salentiny, L-9080 Ettelbruck, Cardiologie

**8. The following examination has been arranged:**

- dynamic stress echocardiography  
("Bicycle stress test")
- dobutamine stress echocardiography (stress test  
with medication)
- with contrast agent       without contrast agent

**9. Important note:**

Please tell your doctor before the examination about intolerances or allergies towards medications, as well as whether you suffer from glaucoma, an enlarged prostate or difficulty voiding your bladder.

