

Cardiac catheterization

In a cardiac catheterization, the cardiologist examines the coronary arteries of the heart.

Through a tube in the artery, the cardiologist slides up a catheter. Through the special catheter, the doctor injects a small amount of contrast fluid into the coronary arteries. On the X-ray screen, the cardiologist can then see how the coronary arteries run, where they are narrowed and how severe the narrowed blood vessels are. The cardiologist can use a cardiac catheterization as an examination but also as a treatment, such as an angioplasty. During cardiac catheterization, multiple examinations are sometimes done, such as an 'ultrasound examination coronary artery (IVUS) or 'measuring the (blood) pressure in the coronary arteries (Fractional Flow Reserve, FFR)'

There may be a number of reasons why you are receiving a cardiac catheterization, for example:

- you have chest pain (Angina Pectoris);
- there is a problem with your heart valve;
- you have had a heart attack;
- you have cardiac arrhythmias.
- The cardiologist then wants to know exactly what your coronary arteries or your large body artery look like. You can read more about this examination [here](#).

Preparation for the examination

How do you prepare?

What do you take with you to the research?

- If you are taking medication, bring it with you for 24 hours. Something to read.

Dress code

You may wear your own comfortable clothing during treatment. It is important that you:

- can easily put on and take off the clothes, such as sports or pyjama pants and a short-sleeved t-shirt; washing machine wears clean clothes;
- do not wear a bra; do not wear clothing on your upper body that contains iron; does not wear jewelry or piercings.

What else should you pay attention to?

- Starting at midnight you may no longer eat or drink products containing caffeine, such as coffee, cola, energy drink, chocolate. You can just take all other food and drinks, including tea.
- Do you have diabetes mellitus? On the day of the examination, simply take your medications as usual.
- Are you using acetosal/acetylsalicylic acid? Don't stop here; you just take it.
- You can take all other medicines you take, unless your doctor has agreed otherwise.
- We recommend that you have someone at your home the first night after the examination or to spend the night with someone.
- Remove nail polish or artificial nails. Your nails must be visible to check the blood flow.
- Leave jewelry and other valuables at home. The hospital is not liable for damage, loss or theft of your property.

Transportation home

We strongly advise you not drive your own car after the examination. Therefore, arrange someone who can take you home.

Resistant bacteria (BRMO)

Do you carry a resistant bacterium (e.g. MRSA or ESBL) with you? Then this can give yourself and fellow patients a risk in medical treatment.

It is therefore very important that you pass on if you:

- have been admitted or treated in the past 2 months, in a foreign healthcare institution; have been admitted to the hospital or nursing home in the past 2 months, where a resistant bacterium was present; has lived in an institution for asylum seekers in the past 2 months;
- comes into contact with live pigs, veal calves or broiler chickens through your profession (for example: pig, calf and poultry farmers, veterinarians, slaughterhouse employees); lives on a holding with pigs, calves or broiler chickens;
- have ever been infected with a resistant bacterium;
- has contact with someone who carries a resistant bacterium.

If necessary, we will then investigate whether you are carrying a resistant bacterium or whether you have a COVID-19 infection. If that is the case, we take measures in the hospital to prevent the bacterium or virus from spreading.

If one of the above points applies to you, please inform the outpatient clinic or department that has agreed the examination or treatment with you.

The examination

How does the examination work?

Where do you report?

You report to the registration desk of the hospital. The employee of the registration Desk or a volunteer will point you further to the right department.

For the examination

You will arrive at the Cardiology department (D1). One family member or loved one may be present this day. On the ward you have an admission interview with the nurse. Furthermore, the nurse will prepare you for the examination:

- it measures your blood pressure and temperature; you will receive an INFUSION needle in your arm; you will be given a soothing medicine for the examination.

During the study

There is one room where we perform the cardiac catheterization. When it is your turn, you walk to the examination room and step up on the examination table. It is possible that someone who came to the waiting area after you gets their turn before you. You will be examined by the cardiologist you are assigned to.

To prevent infection, we take special hygienic measures:

- The cardiology team wear sterile uniforms;
- over the equipment are sterile cloths;
- after disinfecting your groin and/or your arm, we put a sterile sheet over you.

The examination can be done through the wrist artery or groin. The cardiologist will give you an anesthetic shot and then insert a tube into the artery. Through this, the cardiologist slides the catheter up. You normally do not feel anything from the sliding of the catheter, this is because the blood vessels are numb.

Through the special catheter, the doctor injects a small amount of contrast fluid into the coronary arteries. On the X-ray, the doctor can then see how the coronary arteries run, where they are narrowed and how severe the narrowed vessels are. During the cardiac catheterization, we always keep an eye on your blood pressure and heart rate. When injecting the contrast fluid into the heart, you can get a warm feeling throughout your body. You may also feel like you need to urinate. This feeling is over after about fifteen seconds. Do you have complaints during the examination, such as chest pain? Then say this right away. The doctor can then possibly give you medication for this.

The examination takes about 1.5 hours.

After the examination

What happens after the examination?

In the cardiac catheterization room

Through the groin

After the examination, the cardiologist closes the puncture site of the artery with an Angio-Seal or the nurse presses the puncture site tightly for a while. After that, you will be given a firm pressure bandage that should remain in place for four hours and you will have to lie still in bed.

An Angio-Seal is a plug that ensures that the puncture hole of the artery in the groin is closed. You will receive a card with instructions for doctors. This card states that you should preferably not be punctured in this groin for the first three months after the cardiac catheterization. It takes three months before the Angio-Seal is dissolved. Therefore, carry this card with you for the first three months. It is wise to inform your partner or other immediate family of this. If a new catheterization is needed within three months, it should preferably be punctured in a different place than through the groin where the Angio-Seal is placed in the artery. After three months, this measure is no longer necessary and you no longer have to carry the ticket with you.

On the wrist

You will receive a printed band (terumo strap) on your wrist that must remain in place for at least four hours. You will also be given a sling for 48 hours, which you can take off at night. A terumo strap is a plastic bracelet that prints the wrist artery by injecting 13 cc of air. In the department, the strap is emptied again.

At the Hartlounge

After the examination, return to the Heart Lounge. The nurse will check your blood pressure, pulse and puncture site regularly. It is good to drink extra. This allows the remains of the contrast fluid to be quickly discharged through the urine. If you get pain complaints after the treatment or do you continue to have them? Please tell the nurse.

On the wrist

Is the treatment done through your wrist? Then you do not have to stay in bed after the treatment. However, you must remain on the Hartlounge until the terumo strap is removed. The emptying of the terumo strap takes place according to a predetermined schedule. Usually you can go home the same day.

Through the groin

Was the examination done through the groin? Then you stay in bed until the nurse removes the pressure bandage. This happens during the course of the day and depends on the time when the groin catheter is removed. After this you can get out of bed and walk around. If the checks are good, you can go home again.

What are the risks?

With a cardiac catheterization, small, but sometimes also serious complications can occur. Usually, the research proceeds without problems.

Complications due to the cardiac catheterization that pass again are:

- a bruise at the puncture site;
- abnormalities of heart rhythm;

- allergy due to the contrast fluid;
- coronary artery cramping.

Serious complications that almost never occur are:

- the formation of blood clots that can cause myocardial infarction or stroke; the amount of contrast fluid can cause overloading of the circulatory system. You may also get a stuffy feeling;
- damage to the blood vessel. This can cause you to get bleeding in your body; death.

Home

If you are allowed to go home, you will receive the following papers:

- The resignation letter with rules for home.
- An appointment with your own cardiologist or we will send the appointment letter to your home address.

At home

What should you think about at home?

Advice for home

Cardiac catheterization via inguinal artery

It is important that you spare the groin for five days. Therefore, follow the following advice. You may:

- do not lift too heavy;
- do not climb too many stairs;
- do not vacuum and do other heavy housework;
- do not walk long distances; do not cycle;
- do not drive a car for the first two days after the procedure;
- do not make sudden movements, such as bending down;
- do not exercise. do not shower for the first two days after the procedure.

It is normal for your groin to be sensitive for the first few days. A bruise may also occur. That is not bad and this disappears after a few days.

Cardiac catheterization via an artery in the wrist

It is important that you spare your wrist for three days. Therefore, follow the following advice:

- you should not lift too heavy;
- you are not allowed to drive a car for the first two days after the procedure;
- you are not allowed to exercise;
- after the procedure you wear your arm in a sling for two days during the day, which you can take off at night.

It is normal for your arm to be a bit sensitive in the first few days.

After the first week you can do your daily activities as you are used to. As soon as your groin or wrist is back in order, you can go back to work.

What should you do in case of problems at home?

If you have problems related to the examination before your check-up appointment, call the hospital.

- During office hours, call the Cardiology outpatient clinic, telephone number 745-0023
- In urgent cases outside office hours, contact your general practitioner

If you have any questions or problems after your first check-up appointment, call your general practitioner.

Do you not have a check-up appointment in the hospital? Then you call the hospital in case of problems in the first 10 days after the operation. After 10 days you call your doctor.

Practical tips

What do you take with you during a (day) admission?

If you come to the hospital for an admission or day admission, please bring your valid ID and your patient card. But also, for example, the medicines you use at home.

Source: Jeroen Bosch Hospital