

Patient information

Catheterization, Coronarography and Intervention Cardiology

Dear Sir,
Dear Madam,

At request of your treating physician and appointment was made for you for a heart catheterization and/or a percutaneous intervention.

In annex you will find:
(1) an information document (white)
(2) a consent form (colored)

We kindly request you to read the added information document attentively and to sign the consent form and hand it over to the nurse who will come and get it. At that time you can still ask additional questions.

For organizational and legal reasons it is important that this happens before the planned procedure.

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9300 Aalst
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With the highest
esteem,

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Cardiologic Team
OLV-Hospital
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Heart catheterization and/or percutaneous intervention

Introduction

Using this document the cardiologic team of the OLV Hospital wants to dispense to you more information about heart catheterization, coronarography and percutaneous coronary intervention (PCI). It is our intent to describe to you the investigation as briefly and clearly as possible. Presumably you will have additional questions after reading this document. Do not hesitate to discuss these with one of your treating physicians or nurses.

In case of pregnancy or possible pregnancy this investigation cannot go on in any case !!

GENERAL

A **heart catheterization** is the general name for every investigation of the heart where a catheter is used. Via these catheters it is possible to measure pressures in the different heart chambers, to collect blood samples and inject contrast (with the intent of picturing the flow of the coronary arteries), or to measure electrical signals in the heart. The catheters are shoved until into the heart from the groin crease, elbow crease or the wrist.

A **coronarography** is an investigation where pictures can be taken from the heart and the coronary arteries. Thanks to these X-rays one can determine eventual narrowings of the coronary arteries (that provide the heart with blood). It is also possible to discover deviations of the heart itself and of the heart valves this way. It is an investigation with which there is only local sedation needed, in other words it is not an "operation".

A **percutaneous coronary intervention** (PCI), is the treatment of a narrowed or cluttered coronary artery by means of a balloon and/or stent. A PCI can eventually happen right after a coronarography.

Preparation for the investigation

A heart catheterization or coronarography usually requires a short admission but can also happen via day clinic.

Before the actual investigation or the treatment takes place, some preparatory investigations mostly have to take place: blood investigation, radiography of the lungs and an electrocardiogram. These investigations will be performed on the day before the heart catheterization.

A nurse will then also shave of the body hair on the place where the investigation happens (groin crease or wrist).

Before you leave for the catheterization room, you will receive 2 pills. The one is a light tranquilizer and the other a substance to oppress eventual allergy to the contrast substance.

Both drugs you can take with water.

An infuse will be placed in the arm. This serves to administer medication during catheterization. Also one will ask of you to put on a hospital gown. Before you leave for the investigation room, it is advisable to urinate. You can keep your glasses on.

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At arrival in the catheterization room you can lie down on the investigation table. After this multiple electrodes will be stuck to your body. You will see a variety of devices. Do not be startled by this, it all seems more imposing than it is.

Now the nurse will prepare you for the investigation. The area around the groin or wrist will be disinfected extensively. After this you will be covered with sterile cloths, only the face will be left uncovered.

The place where the catheters will be introduced, will be sedated locally. This is to be compared to a sting with the dentist. Now the doctor will allow the sedation to start working for a short while. Afterwards you are not supposed to feel any pain anymore. Is this the case anyway, then you certainly need to tell so eventual extra sedation can be administered.

Afterwards the actual investigation starts. First a tube (conductor) will be entered via the groin. Through this tube different wires (catheters) will be shoved towards the heart and the coronary arteries. The shoving of the catheters happens feelingless. Via these catheters a colorant (contrast) will be injected. To make a picture of the heart itself a bigger quantity of colorant will be injected in the heart under high pressure. This will give you a sensation of warmth all over your body. This is completely normal and lasts only ten seconds. The nurse will warn you in advance about this so you don't have to be startled.

During the catheterization the cardiologist will ask you from time to time to breathe deeply and to hold your breath. The whole investigation (from beginning to end) usually lasts less than an hour. If you experience some discomfort during the procedure, do not hesitate to report this to a physician or nurse.

We like to inform you of the use of cameras in the different spaces of the cathlab. This in the context of patient observation and safety.

After the investigation

After the investigation the nurse of the investigation room will remove the tube from your groin or wrist. A pressure bandage will be applied and you then have to lie flat in bed for a couple of hours. This is of great importance to prevent afterbleeding, especially when the investigation happened via the groin crease. The nurse will tell you starting from what time you can get up.

You can drink and eat again one hour after the removal of the tube.

The nurse will regularly check your blood pressure, heart rate, groin, elbow crease or wrist.

Because of the lying flat you can experience back complaints or you can be cold. This is quite normal. Do not hesitate to report this to the nurse anyway. A painkiller or an extra blanket can offer some extra comfort.

Can complications occur after a coronarography?

The stringent nursing checks after the coronarography/catheterization are aimed at preventing or quickly recognizing complications. Still it can happen that complications occur. Most common are nausea (feeling unwell) and bleeding on the spot where the catheter was removed (mainly at the height of the groin) To prevent afterbleeding at the height of the puncture place, it is important to follow guidelines and to not get up before you receive permission for this. A limited afterbleeding is always possible and can happen together with a local swelling and blue discoloration (hematoma) at the height of your groin. This should not worry you. It can take a few days before the hematoma is completely gone. You can trust in the nurse and physicians being specially trained to get everything under control fast.

That's why it is important to follow their instructions, even if they seem somewhat superfluous at first sight.

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Discharge

The cardiologist will first examine the images of the coronary arteries and the heart thoroughly (mostly together with other colleagues). Afterwards he will come to your room to discuss the result together with you. The nurse will tell you when you can more or less expect the doctor.

A sketch of the heart and the coronary arteries has also been added to this brochure. The doctor will, if necessary, discuss the diagnosis using these. Before you are discharged from the hospital the head nurse will join you in your room.

You can then still ask for additional information or discuss practical formalities.

The percutaneous coronary intervention (PCI)

A balloon dilatation (= blowing up of a balloon in narrowed or cluttered blood vessel) goes more or less like a coronarography. Also the preparations are identical. After the catheters have been put into place, a 'shortened' coronarography happens to picture the narrowing precisely. After this the special ballooncatheter is brought towards the narrowing. The balloon is blown up and the narrowing is opened in that way. To prevent that the artery snaps shut again a stent (small metal spring) is placed in the blood vessel.

It can happen that you feel chest pain during this procedure. This is not abnormal. It is important to report this to the cardiologist or nurse immediately.

After the PCI

After the procedure the catheters are removed. The nurse will return you to the room in your bed. You need to remain lying flat in bed. This is of great importance to prevent an afterbleeding. The nurse will tell you starting from what time you can get up. You can start drinking again.

The nurse will regularly check your blood pressure, heart rate and groin crease. Because of the lying flat you can experience back complaints or you can be cold. This is quite normal. Do not hesitate to report this to the nurse anyway. A painkiller or an extra blanket can offer some extra comfort.

Can complications occur after a PCI?

The stringent nursing checks after the dilatation are aimed at preventing complications or to recognize them quickly. Still it can happen that problems occur. Most common are: nausea (feeling unwell), chest pain and afterbleeding in the groin, which can lead to a more or less important hematoma. To avoid this you need to follow the guidelines of the nurses, even if they seem superfluous at first sight.

If you should feel pain in the chest again after the dilatation you need to notify a nurse or physician immediately. Exceptionally the dilated segment can become cluttered again and a second dilatation is necessary.

Discharge

Before discharge the cardiologist that executed the procedure will come by your room. The nurse will tell you when you can more or less expect the doctor. The day of your discharge from the hospital the head nurse will join you in your room. You can then still ask for additional information or discuss practical formalities.

A nurse or a medical secretary will, after about thirty days, call the patients that underwent an intervention. The intent of this is to handle eventual late complications.

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Some common questions

Can I reserve a room in advance?

When you have a preference for a certain room, you can call the admission service cardiology of the hospital campus Aalst tel. 053/72 44 37 or campus Asse tel. 02/300 63 37.

We will certainly take your choice in account. It is however the case that hospital rooms can't be kept available in the case of urgent or unforeseen admissions.

A full guarantee for the fulfilling of your choice we can impossibly give you. We ask your understanding for this.

What can't I forget when I come to the hospital to undergo a catheterization?

- Identity card
- Blood group card
- Home medication
- Eventual letter of general practitioner or specialist
- Toiletries

NO money or other things of value. The rooms dispose of a vault.

Leave them eventually in the vault. In your interest: **NEVER** leave things of value unguarded.

When can I get back to work?

In principle you can do everything 24 hrs after a heart catheterization. There are however some points of attention:

- Lifting of heavy objects and cycling: wait 3 days.
- Taking a bath: wait 3 days, showering is possible.

A heart catheterization is no treatment. When you were unfit for work before the investigation, you have to discuss with the doctor first whether or not you can go back to work. It can happen that the catheterization brings certain problems to light that make it irresponsible to resume work.

Resuming work after a balloon dilatation or ablation will be discussed with your treating cardiologist. In principle you can do everything 48 hrs after treatment with procedures under local sedation. If general sedation was used, your unfitness for work will be discussed individually. Mostly in that case 1 week of unfitness for work is prescribed. Here also the same points of attention are valid as mentioned above.

Do I have to stay sober for the investigation?

Until six hours before the procedure you can eat, after that you have to stay sober (no eating/no drinking).

Can I take my home medication?

At your admission in the hospital a nurse will note your home medication. You will then receive clear instructions what medication you can take and what medication you have to stop. So it is absolutely important to bring your home medication along to the hospital.

If you take anticoagulant medication like **Marcoumar®**, **Marevan®** or **Sintrom®** you need to follow the given along instructions precisely.

For some procedures (coronarography, PCI, EPI) you have to stop these 4 days before admission and notify your home doctor of this. For an ablation it is possible that you are asked to continue taking medication.

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It is also possible that this medication has to be temporarily replaced by injections. With treatment of Pradaxa or Xarelto this medication has to be stopped at least 24 hrs before the investigation. You will receive a specific advice for your individual case. In case of doubt, you can always contact us by phone. For all clarity: Aspirine® and Plavix® are no anticoagulant and do NOT need to be stopped.

Can I drive a car after a catheterization?

In principle, immediately after a coronary investigation or PCI you can't drive a car.

Where do I go with certificates for the insurance, mutuality or employer?

Always keep these certificates with you in the room. If these have to be filled out by a physician, he will do this at the discharge conversation. Certificates that need to be filled out by the hospital institution, you can always have filled out at the reception counter while leaving the hospital. If there are unclarities about this, you can always speak to the head nurse of the ward.

What formalities do I have to fulfill before leaving the hospital?

Before you leave the hospital, you need to report at the nursing station of the ward. No financial settlement has to happen, the hospital bill will be sent to you later on.

Some useful telephone numbers

	Campus Aalst	Campus Asse
General reception of the OLV Hospital	053 72 42 11	02 300 61 11

Reception secretariat cardiology	053 72 44 33	02 300 63 37
Secretariat coronarografie	053 72 44 37	
Nursing ward coronarography X4N	053 72 42 43	02 300 62 84
X2Z	053 72 43 50	
X2N	053 72 48 20	
Nursing VE5		02 300 6090

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With this information we hope to have been of service. If you should require more information, we are gladly available.

May we ask you to sign the added form and to bring it along with your admission in the hospital.

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Informed Consent

By signing this document, I declare myself in agreement with the point below. This agreement is valid for all investigations and interventional treatments that could take place in the service cardiology of the OLV Hospital, Aalst.

1. Signer has received sufficient information regarding the advantages and disadvantages of the procedures that are planned with me.

Me, signer, hereby give my consent for the performing of the investigation, as requested by my treating physician.

0 Yes

0 No

2. To obtain a refund with balloon dilatation and/or stent implantation, or use of material for ablation, the patient has to give consent to have his medical data processed by the Belgian work group for Invasive Cardiology and the Technical Council for Implants or the Belgian work group for heart rhythm disruptions.

Me, signer, give hereby my consent for the treating of the data of my record by the RIZIV so the executed treatment can apply for refunding.

0 Yes

0 No

3. It is possible that we want to collect some extra milliliters blood or heart muscle tissue for DNA investigation into the genetic cause of heart diseases, namely heart failure, the originating of narrowings on the coronary arteries, during your next blood collection. The DNA is the hereditary material that is transferred from parent to child.

Me, signer, hereby give my consent for participation with a DNA investigation and agree that my data will be processed anonymized. Also I give my consent to the investigators to give the controlling instances insight into my medical record.

0 Yes

0 No

4. Before, during and after a heart catheterization, a percutaneous coronary intervention or ablation often additional information has to be gained regarding the electrical and mechanical functioning of your heart, the blood flow of it and/or the condition of the wall of your coronary arteries. This information is important to choose the different treatment options as optimally as possible and is also used to evaluate the quality of the respective procedures. You can be asked to fill out questionnaires (before and after the treatment) with which we can evaluate your general health condition. Your cardiologist requests you to participate with a registration of these data. These, together with clinical elements, will be stored in a database and possibly be analyzed in the context of scientific research and guarantee of quality.

Me, signer, give hereby my consent for the storing of my clinical and physiological data (including imaging) and the anonymized use of these data in the context of scientific research.

0 Yes

0 No

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Name of the Patient:Date of birth:.....

Signature:Date :.....