

Coronary Angiogram (Cardiac Catheterisation)

Cardiac

Introduction

This leaflet has been designed to give you some more information about the Coronary Angiogram test undertaken on patients at the Heart and Lung Centre, New Cross Hospital. It will help you to understand what will happen to you, explain the benefits, possible risks of the procedure, the alternatives if you do not wish to go ahead with the test, and ensure that you know as much as possible about the test before you agree to it and sign the consent form.

What is a Coronary Angiogram?

A Coronary Angiogram is a test which can provide information about the coronary arteries, the vessels that provide the blood supply to your heart muscle. In most cases the test is done to see if these arteries are narrowed. Sometimes the test is referred to as "Cardiac Catheterisation", particularly when your Doctor wants to know more about how well your heart is working or measure the pressure of the blood within the chambers of your heart.

Consent

We must seek your consent for any procedure or treatment beforehand. Your Doctor will explain the risks, benefits and alternatives where relevant before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed please do not hesitate to ask for more information.

What are the benefits of a Coronary Angiogram?

Looking at the blood supply to your heart muscle and recording the pressures within the chambers of your heart will help your Doctor to evaluate your symptoms and plan the most appropriate treatment for your heart condition.

What are the risks of a Coronary Angiogram?

Significant, unavoidable or frequently occurring risks:

- Less than 1 in 100 risk of complications:
 - Infection
 - Abnormal heart rhythms (arrhythmias)
 - Heart attack (myocardial infarction)
 - Stroke

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

- Need for urgent coronary artery bypass grafting (bypass operation)
- Collection of fluid in the sac which surrounds the heart (pericardial effusion)
- Need to restore heart rhythm to normal by means of a shock (cardioversion)
- Damage to the blood vessels in the groin or the wrist requiring further treatment
- Excessive radiation or sedation
- Allergic reaction to dye or worsening of kidney function
- Up to 5 in 100 risk of bleeding or blood collection (haematoma) in the groin or the wrist
- Less than 1 in 1000 risk of severe allergic reaction to the dye or medication (anaphylaxis), or death.

What alternatives are there if I choose not to have a Coronary Angiogram?

A Coronary Angiogram will give your Doctor the best images of your coronary arteries. Without this information, we may not be able to advise you whether or not you might benefit from interventions such as balloon angioplasty (stent) or bypass graft surgery. However, there are other types of scan which may provide useful information about your coronary arteries; your Doctor will have discussed these with you, or you may have already had such a test.

Your Doctor would not recommend a Coronary Angiogram unless they felt that the benefits of the test outweighed the small risk.

What happens before the procedure?

- Please bring with you a dressing gown, slippers and overnight bag in case you have to stay overnight, though this is very rare
- You should not eat for 4 hours prior to the procedure but can take oral fluids up to the procedure
- Be sure to take all your normal medication for that morning with a small sip of water
Exceptions to this are if you require tablets or insulin for your diabetes, or warfarin / phenindione / acenocoumarol (sinthrome) or one of the newer anticoagulants: please follow instructions under the Medications section
- Please bring all your medication with you in its original containers
- Preparation will begin with the Nurse and Doctor asking you a series of questions about your general state of health and assessing your fitness for the procedure
- A Doctor or Nurse will ask you to confirm your consent. This is a good opportunity for further discussion about your procedure. Please tell us before the procedure if there is any possibility you may be pregnant as we would want to avoid any exposure to X-rays
- Please advise us if you have any allergies
- You will be fitted with a wristband containing accurate details about you. It ensures that staff can identify you correctly and give you the right care. It is important that you do not remove it until you go home
- You will have blood tests, a repeat heart tracing, and a small plastic tube (cannula) inserted into a vein in your arm so that intravenous drugs can be given if necessary
- We will provide you with a gown and disposable paper pants to wear during the procedure. You will need to remove all your clothing, jewellery (except your wedding ring) and makeup, including nail varnish
- If necessary, the Nurse will shave any excess hair at the site of insertion of the catheter (wrist or groin).

Medications:

What to do if you are diabetic

- **If your diabetes is diet controlled** you may follow your normal routine.
- **If you take tablets (other than metformin – see below) to control your diabetes** you may follow your normal routine and take your tablets.
- **If you normally take metformin tablets:** do not take them on the day of the procedure and for the period of 48 hours following the procedure.
- **If you use insulin in order to control your diabetes** you may follow your normal routine.

What to do if you take warfarin / phenindione / acenocoumarol (sinthrome) or one of the newer anticoagulants

If you take warfarin, phenindione, acenocoumarol (sinthrome) or one of the newer anticoagulants (for example, apixaban, dabigatran, edoxaban or rivaroxaban) you may have been informed already what to do. If you have not, or remain unsure, please contact your consultant's secretary or the cardiology day ward.

Usually, warfarin / phenindione / acenocoumarol (sinthrome) is stopped two to three days before the procedure, but please check as this is not always appropriate. Patients with artificial heart valves may need to continue these medications.

What happens during the procedure?

The Coronary Angiogram will be carried out in a room called a Cardiac Catheterisation room, with X-ray equipment to take a picture of your arteries. A team of staff including Nurses, Doctors, a radiographer and a technician will look after you during the test. You will be awake during the test, but if you are worried it may be possible to give you a sedative to help you relax.

- Throughout the procedure you will be lying on your back with your head supported on a well-padded table. If this makes you short of breath we can give you oxygen. Both the table and X-ray equipment will move at times to take different views when the Doctor is injecting dye into your arteries
- Sticky electrodes are attached to your chest to monitor your heart rhythm and rate; a probe attached to your finger records your oxygen levels
- The top of your lower arm or leg will be cleaned with antiseptic solution and you will be covered in a sterile drape
- An injection of local anaesthetic will be given to the top of your lower arm or leg. You may feel a sharp scratch and a stinging sensation, but this will pass quickly. A small plastic tube (sheath) is then inserted into the artery to enable the catheters to pass smoothly. Occasionally, a second tube is placed in the vein in your groin in the same way
- The Doctor will pass a catheter through the sheath into your coronary artery. A dye is injected in order to outline your arteries so that we can see if there are any narrowings or blockages
- At the end of the test you may notice a warm flushing feeling from head to toe lasting for a few seconds. You may also notice the sensation of passing water. This is just a feeling; you will not have wet yourself. We will warn you when you may notice this
- You may be aware of your heart beating quickly or irregularly. Usually no treatment is required. Remember that your heart rhythm is monitored throughout the procedure
- Very occasionally some patients experience chest discomfort during the procedure. Please tell us if this happens so that we can give you any pain relief that may be necessary
- Once the procedure has been completed the plastic tube will be removed and pressure applied to the area in order to control bleeding from the blood vessel.

What happens after the procedure?

- Your blood pressure, pulse and puncture site will be checked at regular intervals. You will be attached to a monitor to observe your heart rhythm
- If the puncture has been made in your groin it may be sealed with a special device (Angioseal) in which case you will be able to sit up immediately provided that bleeding and bruising is not a problem
- If the puncture in your groin has not been sealed, pressure will be applied to the area until we are sure that there is no bleeding. You will need to remain in bed for 4 hours, lying flat for some of that time
- If the puncture has been made in your lower arm, a pressure device is put over the area until we are sure that there is no bleeding. You will be able to sit up immediately
- A small dressing is applied to your puncture site
- You will be given food and drink before you go home
- Before you go home the Doctor will discuss the results of your test with you.

What treatment options may be available to me?

The results of your test will help determine the best treatment for you. The options will usually be:

- To treat any problem with medication. We may be able to reduce your medication if your test is normal
- To treat a diseased artery (or arteries) with balloon angioplasty, usually with the insertion of a stent, in which case a further appointment will be sent to you
- To treat a diseased artery (or arteries) with a coronary artery bypass operation (CABG or bypass), in which case a further appointment will be sent to you
- To treat a diseased valve (or valves) with valve surgery, in which case a further appointment will be sent to you. Some people need surgery for both arteries and valves.

Do not be concerned if we are unable to give you a definite decision on the day of your test. The result of your test (and any other relevant tests that you may have had) will usually be discussed at a meeting of heart specialists so that we can be sure that we are advising the best treatment for you.

When can I go home?

In most cases patients are able to go home the same day. Please arrange for a relative or friend to collect you after the procedure as you will not be able to drive for 24 hours. If possible you should have a responsible adult to stay overnight with you at home. Alternatively, it is advisable to have the telephone number of a neighbour, friend or relative who could help you in an emergency.

What advice should I follow?

- You should avoid soaking in a hot bath for 24 hours as this may disturb the plug that has formed at the puncture site. You can have a warm shower or wash in warm water
- Remove your dressing after 24 hours. A further dressing should not be required. If there is any discharge from the puncture site, contact your GP
- If the puncture was made in your groin, bruising may be confined to a small area or extend as far as your knee, taking several weeks to disappear. If it was made in your lower arm, your wrist may be bruised, in which case any bruising or discomfort should ease within a few days. If you notice your puncture site is hard, swollen, red or warm to the touch, or if you develop a fever, contact either your GP or contact us on one of the telephone numbers given at the end of this leaflet so that we can advise you
- If your puncture site starts to ooze a small amount of blood, sit or lie down and apply pressure for 5-10 minutes. If slight oozing continues call your GP

- If the bleeding is heavy and forceful (this is very unusual), press hard over the puncture site, call 999 for an ambulance and explain that you have had a Coronary Angiogram
- If you experience any severe chest pains lasting for more than 10-15 minutes unrelieved by Glyceryl Trinitrate (GTN) call an ambulance
- If a closure device (Angioseal) has been used at your puncture site please carry the information card given to you for 90 days, after which time the plug will have dissolved. You should avoid further puncture at the same site during these 90 days.
- **If you are diabetic and take metformin:** do not take it for 48 hours after your procedure, to allow time for your kidneys to excrete the dye used during the test
- **If you have stopped your warfarin / phenindione / acenocoumarol (sinthrome), or one of the newer anticoagulants, you will usually restart it the day after your procedure, or follow your Doctor's instructions.**

Gradually increase your activity over the next few days. If your test was performed via your arm:

- Avoid heavy lifting, pulling, pushing with the affected arm for one week
- If your arm becomes numb or swollen, or your fingers go blue, contact your GP, or ourselves on one of the following numbers given at the end of this leaflet so that we can advise you.

If your test was performed via your leg:

- Do not drive for 24 hours, or stand for long periods.
- Do not work for 48 hours. If your job involves strenuous physical activity, or if you have excessive bruising and swelling, you may need to rest for longer.
- If you sneeze, cough or laugh, gently support your puncture site with your hand during the first 24 hours.

NB: the diagnosis of a heart condition may affect your ability to hold a vehicle driving licence, particularly if you have a vocational (for example, PSV or HGV) licence. For further information you should contact the DVLA on the number given below.

How to contact us

Cardiac Catheter Suite

Second Floor
 Wolverhampton Heart and Lung Centre
 New Cross Hospital
 Wolverhampton
 West Midlands
 WV10 0QP
 Tel: 01902 694273

Cardiology Ward
 01902 694330 or 01902 694223

Additional information is available from:

Wolverhampton Coronary Aftercare Support Group (WCASG)

Heart and Lung Centre

New Cross Hospital

Wolverhampton

Email: WCASG79@gmail.com

Tel: 01902 755695 Mobile: 07889 063647

Website: www.have-a-heart.net

Patient Advice and Liaison Service (PALS)

Patient Liaison Centre

New Cross Hospital

Tel: 01902 695362 Mobile: 07880 601085

Pager 1463 (Dial 01902 307999 and give the pager number to the switchboard operator).

Email: rwh-tr.pals@nhs.net

Age Concern Wolverhampton

Supportive discharge service for anyone aged 50 or over, based in New Cross Hospital.

Tel: 01902 695517 or 07753 718929

British Cardiac Patient Association

15 Abbey Road

Bingham

Nottingham

NG13 8EE

Email: admin@bcpa.co.uk

National Helpline: 01223 846845

Website: www.bcpa.co.uk

British Heart Foundation

Greater London House

180 Hampstead Road

London

NW1 7AW

Tel: 0845 070 8070

Website: www.bhf.org.uk

DVLA

Drivers' Medical Group

DVLA

Swansea

SA99 1TU

Tel: 08760 600 0301 (8:15am – 4.30pm, Monday – Friday)

Website: www.dvla.gov.uk

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。