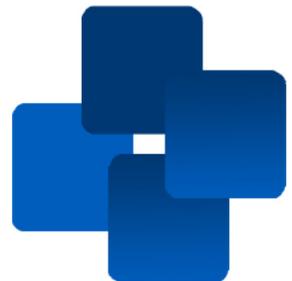


Patient Information

Coronary Angiogram

Cardiac Suite
Cardiology Department



What is a coronary angiogram?

A coronary angiogram is an invasive investigation to detect signs of heart disease, such as narrowing of the coronary arteries or damage to the heart valves or muscles.

Why do I need a coronary angiography and what are the benefits?

Coronary angiography can be used to help diagnose heart conditions, help plan future treatments and carry out certain procedures. For example, it may be used:

- after a heart attack where the heart's blood supply is blocked;
- to help diagnose angina, where pain in the chest is caused by restricted blood supply to the heart;
- to plan interventional or surgical procedures, such as a coronary angioplasty, where narrowed or blocked blood vessels are widened.

Coronary angiography is considered to be the best method of diagnosing coronary heart disease. This is when a build-up of fatty substances in the coronary arteries affects the heart's blood supply.

What are the risks?

As with many procedures, this procedure does have some associated risks. These will be outlined and explained to you on the day of your procedure, during the consent process.

What do I need to do before the procedure?

- You will have received a letter stating the time that you need to arrive for your procedure and what time you can have your last meal and drink (usually 6 hours before). You can usually drink clear fluids only up to 2 hours before your procedure.
- For women of childbearing age (12-55) and if you are menstruating, please ensure your appointment is within 10 days from the start of your period. Please contact the booking clerk to rearrange your appointment if necessary.
- You will need to arrange for somebody to collect you after your procedure as you are **not** allowed to drive for 48 hours.

- On the day of your procedure, please bring a dressing gown, slippers and any medication you may need with you. You may also wish to bring a book or newspaper etc. It is also advised to pack an overnight bag in case there are any complications and you need to stay a little longer. Please note, the hospital does not accept responsibility for patient's personal belongings, you therefore may want to leave any items of value at home.

Allergies

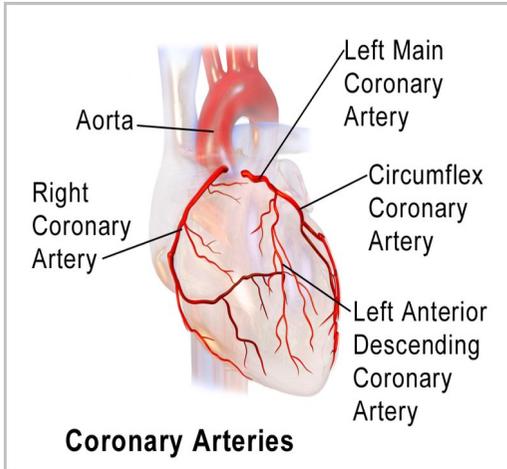
- Please let us know of any allergies that you may have. Some patients are allergic to the dye (contrast) that is used during the procedure and, in rare cases, can have a serious reaction. If you have ever had any reaction previously, please let your nurse know. Medication can be given to help minimise the reaction.

Medication

- You will need to bring your regular medications with you in their original packaging.
- Anticoagulation - if you are currently taking Warfarin or a similar anticoagulant, such as Apixaban, Dabigatran or Rivaroxaban, your referring cardiologist will decide whether you should continue or stop the medication before the angiogram. If in doubt, please call the cardiologist's medical secretary for clarification, you can find this either on your letter or by calling the Cardiac Suite. You should receive a pre-assessment appointment which will clarify everything.
- Diabetes medication - if you are diabetic and take tablets or insulin, you **must** contact your diabetic specialist nurse to be given specific instructions according to your medication for the day of your procedure.

Please be aware that the Cardiac Suite also provides an emergency heart attack service available 24/7 with patients requiring immediate life saving treatment. This can delay your procedure but if this happens, you will be informed by a member of staff.

Diagram of a normal heart and the coronary arteries



A normal heart has three main vessels called coronary arteries that are located on the outside of the heart. The coronary arteries supply the blood to the heart which is then pumped around the body. These are the arteries that the doctor will be looking at during your procedure for signs of narrowing or blockages.

What will happen during the procedure?

The procedure will take approximately 30-40 minutes and will take place in an operating theatre located in the Cardiac Suite. A cardiologist, nurse, physiologist and radiographer will be present.

You will be asked to lay down on the operating table. You will remain awake for the procedure but medication (sedation) may be given to help you relax. You will have a local anaesthetic administered to either your wrist or groin to numb the area. Once the area is numb, the doctor will make a small incision into the chosen access area and, under X-ray guidance, will pass a long narrow tube (catheter) through the artery to your heart.

A dye (contrast) will then be injected through the tube. The dye will reach the heart and allow your coronary arteries to be seen on the X-ray screen. The doctor will be able to see any narrowing or blockages of the arteries in the heart. The pumping action of the heart can also be seen by moving the catheter into the left ventricle and injecting more dye. You might feel a hot, flushing sensation from the dye, but this will go away within a few seconds.

Throughout the procedure the radiographer will be taking pictures of the heart and coronary arteries. Radiation is used as sparingly as possible; the benefits for using this far outweigh the risks. Please let us know if you have any concerns regarding this.

You may experience chest pain or discomfort during your procedure. It is important to tell your doctor or nurse if this happens so they can consider giving you pain relief medication.

Once the doctor has finished looking at your arteries, the catheter will be removed from your wrist or groin. If the doctor used your wrist for access then a compression band filled with air will be used to seal the puncture site. If your groin was used as access then, most commonly, an Angioseal (a collagen plug) will be used to seal the puncture site. Sometimes it is necessary for manual pressure to help seal the site, however, this will be explained at the time if required.

What will happen after the procedure?

After the procedure you will return to our recovery area where the nursing team will look after you. The access site, your blood pressure and pulse will be monitored. The nurse will advise you of anything you need to do during recovery, for example, if your groin was the access site for the procedure, you will need to lay flat for up to 3 hours to allow the puncture site to seal properly; if your wrist was the access site, the nurse will monitor the compression band and slowly remove air from it for the wound to close.

Please be advised that we are unable to accommodate a patient's relatives or friends in the recovery room. There are a few exceptions to this rule but they must be discussed with a senior member of staff. If you have any questions or concerns, please speak to a member of staff.

Eating and drinking after the procedure

Your nurse will offer you something to eat and drink during your recovery from the procedure. It is important for your kidneys that you drink plenty of fluids as this will help to flush out any dye that was used.

When will I get the results of the procedure?

The doctor will discuss the results with you on the day of the procedure. Likely results are:

- **No treatment** - If no abnormalities are detected in your coronary arteries you may not require any treatment or a follow-up appointment.
- **Medical Management** - Your consultant may continue your current medication as it is, or may adjust the dosing of this. They may decide to introduce new regular medication.
- **Angioplasty or stents** - This involves using a special balloon catheter to open a blocked or narrowed artery. A small mesh tube called a stent is placed in the artery to help keep it open. This may take place during your angiogram or you may need to come back again for this. However, your consultant will discuss this with you as part of your consultation post procedure.
- **Cardiac surgery** - If the doctor finds a severe blockage or more than one blockage, it may be more beneficial to have **coronary artery bypass surgery**. If you need surgery you will be referred to a cardiac surgeon and may have to stay in as an inpatient.

If you have any questions or concerns about your results, please speak to your consultant or one of the nursing team.

Going home

Most patients can go home the same day. Prior to discharge the nurse will ensure that the puncture site is not bleeding and that you are able to leave. Please be aware of the following advice:

- You should not drive for 48 hours.
- It is advised to have a few days off work. Please check with your consultant or nurse on the day of the procedure.
- You should avoid exercise for a few days to allow the puncture site to heal completely.
- Avoid heavy lifting.
- Do not bath for 24 hours, shower instead.
- Keep the wound site clean and dry. Do not apply any cream, perfume, deodorant or talc to the puncture/access site area for 24 hours.
- If the wound site bleeds, you will need to apply pressure and elevate the limb until bleeding has stopped. If the bleeding continues after 10 minutes, call 999 or go to your nearest Emergency Department.
- Flying - please check with your consultant or a member of the nursing team on the day of your procedure to see if you are able to fly. This will depend according to your results.
- Do not be afraid to resume sexual relations when you feel able. Initially, whilst you are still recovering from your angiogram, try positions that require less energy for you.

If you have any complications or concerns after discharge, please use the traffic light system on the back page of this leaflet to help identify the action you should take.

Further Information

British Heart Foundation - www.bhf.org.uk

NHS Choices - www.nhs.uk

Who to contact with complications or concerns

Routine: GP or Cardiac Suite

- **Bruising** - Some bruising can be expected, however, if you are concerned about the amount of bruising, contact your GP or the Cardiac Suite.
- **Swelling** - If you have had an Angioseal during your procedure it can be normal to have swelling up to the size of a pea. If you are concerned, please call your GP or the Cardiac Suite.

Urgent: NHS 111

- **Swelling** - If you have a swelling to the wound site larger than the size of a pea it would be advisable to contact the Cardiac Suite or to attend your local Emergency Department.
- **Rash** - If you have developed a rash and/or feeling unwell it would be advisable to call NHS 111 to be assessed.
- **Bleeding** - If your wound site is bleeding you will need to apply pressure to the wound. If the wound is on your wrist you will need to elevate your arm whilst applying pressure. If the wound is on your groin you will need to lay down whilst applying pressure. **When you are able to control the bleeding it is then advised to call NHS 111 or the Cardiac Suite for further advice.**

Emergency: Call 999

- **Bleeding** - If your wound is bleeding and you are unable to stop the bleeding through the advice listed above, call 999.
- **Chest pain** - if you have a GTN spray use this as directed in the instructions. If chest pain is unrelieved by using GTN spray, call 999.

Telephone numbers:

Cardiac Suite ☎ 01438 284745 / 284746 (Mon to Fri, 8am - 6pm)

NHS 111 ☎ 111

www.enherts-tr.nhs.uk

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You can request this information in a different format or another language.