



York and Scarborough
Teaching Hospitals
NHS Foundation Trust

Coronary Angiogram

Information for patients attending under the care of the Coronary Care Unit or Vascular Imaging Unit

① For more information, please contact:

Coronary Care Unit

Scarborough Hospital

Woodlands Drive, Scarborough, YO12 6QL

Telephone: 01723 342332

Vascular Imaging Unit

York Hospital

Wigginton Road, York, YO31 8HE

Telephone: 01904 726065

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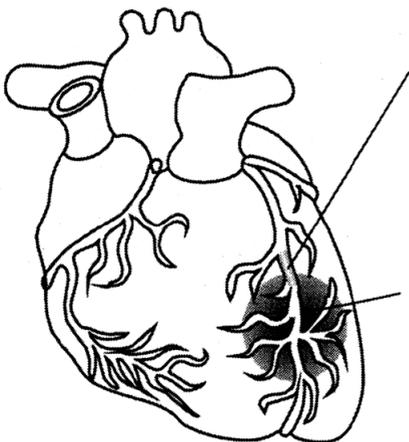
What is angiography?

Angiography is a procedure used to see if your coronary arteries are narrowed. Your heart is a large muscle, which needs a blood supply rich in oxygen. This blood reaches the heart muscle by blood vessels called coronary arteries.

A substance called 'plaque' or 'atheroma' can narrow these arteries. If there is a narrowing of the coronary arteries this can reduce blood flow and lead to chest pain – angina. If a blood clot forms in the narrowing this could cause a heart attack.

To enable the doctor to assess if the arteries are narrowed, a dye is injected through a small plastic tube inserted in your groin or wrist.

Sometimes this procedure can be performed to evaluate or provide further information related to valvular heart disease.



Coronary arteries narrowed by disease - flow of blood restricted...

... Area of "ischaemia" or pain

Are there any alternatives?

This test is necessary if the doctor is going to be able to treat your heart pains or shortness of breath. At the moment there is no other investigation which will give the doctor the same information. You should discuss this with your doctor if you have any concerns.

What are the risks?

As with any procedure, there are some risks. It is normal to have some bruising around the wound site after your angiogram. Bleeding from the wound site and haematoma (a collection of blood underneath the skin like a large bruise) can also occur. It is very rare for measures other than pressing on the wound site by hand to be needed to control this.

Some people may be allergic to the dye used.

Sometimes people experience chest discomfort or angina pain whilst the angiogram is being performed.

Very rarely damage to the artery wall can cause a heart attack. The risk of this happening is one in 1000. A clot can be dislodged causing a stroke. The risk of this happening is one in 1000.

The risk of death from this procedure is one in 2000.

Radiation Risk

Performing a coronary angiogram requires the use of x-rays, a type of ionising radiation, which can cause harm including cancer. Everybody is exposed to ionising radiation all of the time as background radiation, for example a four-hour plane flight exposes you to the same radiation dose as a chest x-ray.

A relatively high dose of radiation is required to perform a coronary angiogram. If the procedure is prolonged, there is a one in 1000 risk of experiencing some skin changes, which may result in reddening of the affected area. There is a one in 10,000 chance of developing a cancer.

This risk has been considered by your consultant cardiologist who has a duty to ensure that the potential benefit to you is greater than the risk from your increased radiation exposure.

The doctor carrying out your procedure will ensure your exposure is as low as reasonably practicable.

Coronary angiogram is not normally recommended for pregnant women. It is essential that you inform the medical team responsible for your care if you suspect you are pregnant.

What are the benefits?

The procedure gives the Cardiologist an overview of the vascular (blood) supply to the heart. With the information from the angiogram, the doctor will be able to decide what treatment is best for you. This may be continuing with medication or further treatment, e.g. coronary angioplasty or possibly bypass surgery.

What do I need to do before coming into hospital?

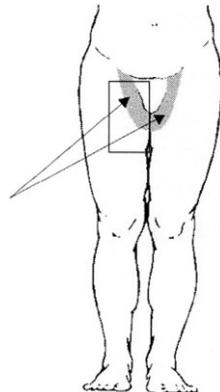
If you are coming to the hospital for a day case procedure, **you must ensure you have arranged for someone to stay with you overnight, after you are discharged.** They will also **need to collect you from the unit**, allowing the staff on the unit to discuss any relevant discharge advice.

If you are given a morning appointment you may have breakfast as you usually would. If you have an afternoon appointment, you may have a light snack (such as a sandwich), at 11am before arriving. Once the procedure is over the staff will offer you a drink and sandwich.

If you are diabetic, it is important that you take your usual medication and have your usual breakfast.

You can take a bath or shower at home before you come into hospital.

Your groin will be shaved (this applies to male and female patients) on your admission to hospital. This helps to prevent infection.



Do I continue to take my usual medication?

If you are on any medication, you may continue to take all your usual tablets, unless you are taking anticoagulants.

If you are taking **warfarin, apixaban, rivaroxaban, dabigatran or edoxaban**, please contact your consultant's secretary, who will advise if you need to stop taking these for three days before the procedure and if you will need another medication in place of these if it is stopped.

If you are taking Metformin (for diabetes) continue to take your tablets up until the day of your procedure but omit taking after the angiogram for two days.

If you are taking aspirin, please continue to take it.

If you are taking a diuretic (water tablet) it is advisable you do not take it on the day of the procedure.

What should I bring with me?

- **All your medication**
- Something to read.
- Reading glasses if you wear them.
- Nightwear including a dressing gown and slippers, and toiletries (in case you have to stay overnight after the angiogram)

What happens when I arrive at hospital?

If relatives or friends accompany you, we will give them a telephone number for the unit and a time when they can contact us with regards to a discharge time. As it is a busy unit, we are unable to let relatives or friends stay with you.

You will be shown to your bed and asked to change into a theatre gown and put on paper underwear.

The staff will record your details and any relevant medical history. Observations are recorded and pulses in your feet (pedal pulses) marked.

One of the team will explain to you what a coronary angiogram entails, go through any risks involved and the aftercare you will require. We will be happy to answer any queries you may have.

At some point before the procedure, we will ask you to sign a consent form (reference FYCON93-3 Coronary Angiogram). You sign to confirm that you agree to the procedure and understand the information given to you. The form will be kept in your Patient Notes, and you will be given a copy for your own records, if requested.

The angiogram will normally take 20 to 30 minutes. It will be performed either by the consultant or by their registrar under direct supervision of the consultant. The doctor, nurse, or radiographer will tell you what is happening and what they want you to do. The x-ray room is like an operating theatre. All the staff wear special aprons to protect them from the x-rays. There is a lot of equipment in the room and a camera that will take pictures of your coronary arteries.

The doctor will inject a local anaesthetic into your groin usually on your right side or into the wrist (if using the radial artery approach). The doctor will then pass a small tube (catheter) into the artery, and up to the origin of the coronary arteries.

If at any time you feel uncomfortable or experience any chest tightness or discomfort, tell the doctor and nurses. While the dye is running through your coronary arteries, lots of pictures will be taken. These are recorded onto a computer so that the doctors can review them and if necessary discuss them with other members of their team.

If your procedure is performed via your wrist, the tube or catheter will be removed in the x-ray room and a wristband will be applied with pressure. If the procedure is performed via your groin, you will be transferred, after the procedure, on a trolley to the recovery bay where the sheath in your groin will be removed by one of the team. Firm pressure is applied to stop the bleeding. This usually takes 10 minutes. Occasionally it can be difficult to stop the bleeding at this stage and we would apply a pressure device.

What happens after the angiogram?

If the procedure was performed via your wrist, you will be able to sit up immediately. The band applied over the wound will remain tight for one hour and then gradually air will be released every 15 minutes until the band is deflated.

If your procedure was performed via your groin, you will need to lie flat in bed for one hour after the angiogram then sit up for one hour. The staff on the Unit will check your blood pressure and pulse frequently during this time. They will also check the pulses in your feet. They will also look at the 'puncture' wound frequently to ensure that there is no bleeding or oozing from this area.

You will stay in bed for a minimum of two hours. The nurse on the Unit will then advise you when to get out of bed. Most patients are able to go home at this time. The nurse on the unit will advise you.

At this stage, you will be wondering about the results of your angiogram. It may be possible to discuss the results of your angiogram on the same day.

Sometimes the doctor may prefer to see you in the outpatient department a few weeks later, as your case may need discussion with colleagues at a later meeting to help decide the best treatment. Feel free to ask questions if you are unclear.

When can I go home?

If the wound is satisfactory and you have not had any further problems, you will be able to go home the same day. To go home you must have:

1. An adult who will stay with you for the next 24 hours.
2. Access to a telephone.

What do I do if I feel there are problems with my catheter site?

1. Patients with a radial (wrist) artery catheter:

- a) If bleeding develops, apply direct pressure and go to your nearest Accident and Emergency Department immediately.

- b) If the site becomes red or swollen, contact your own GP.

2. Patients with a catheter via the groin:

If the site bleeds lay flat and have someone press firmly. If swelling or pain develops, go straight to your nearest Accident and Emergency Department.

Our Contact numbers:

Scarborough Hospital Coronary Care Unit
01723 342332.

York Hospital, Vascular Imaging Unit
01904 726065.

Before you go home, the nurse will give you information and advice on what you should or should not do when you get home. This will include the following:

- You should not drive for two days.
- If you are employed you should have a day or two off work.
- If you have a job that includes heavy lifting you should have two or three days off work.
- You should not lift heavy weights for the first two days. This includes small children. If you are a carer of other people you will need to make other arrangements for at least two days.
- Avoid mowing the lawn, vacuuming, pushing or pulling objects, stretching or bending for a few days.
- Take plenty of rest and gentle exercise. Gradually build up to your normal level of activity over a couple of days.

If you have any questions before you have the angiogram about what you will or will not be able to do afterwards, please contact us:

Scarborough Hospital, Coronary Care Unit
Telephone: 01723 342332.

York Hospital, Vascular Imaging Unit
Telephone: 01904 726065.

Contact numbers

Scarborough Hospital

If you are having your procedure performed at Scarborough Hospital, the following secretary numbers can be used to contact the Cardiology Consultants:

Telephone: 01723 385152
01723 385203
01723 385115
01723 342041

Coronary Care Unit

Telephone: 01723 342332

York Hospital

Dr M.P. Pye's Secretary
Jeanette Kuba

Telephone: 01904 725811

Dr N.P. Durham's Secretary
Sharon Munro

Telephone: 01904 726474

Dr P. Szymeczko's Secretaries

Susan Wharton
Yasemin Celik

Telephone: 01904 721559

Telephone: 01904 725677

Vascular Imaging Unit

Telephone: 01904 726065

For further information on your condition and procedure, please look at the British Heart Foundation's Website: www.bhf.org.uk.

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact the Sister, Vascular Imaging Unit, York Hospital, Wigginton Road, York, YO31 8HE or telephone 01904 726065.

Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email yhs-tr.patientexperienceteam@nhs.net.
An answer phone is available out of hours.

Leaflets in alternative languages or formats

If you would like this information in a different format, including braille or easy read, or translated into a different language, please speak to a member of staff in the ward or department providing your care.

Patient Information Leaflets can be accessed via the Trust's Patient Information Leaflet website:
www.yorkhospitals.nhs.uk/your-visit/patient-information-leaflets/

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