

Having a coronary angiogram

This leaflet explains more about having a coronary angiogram, including the benefits, risks and any alternatives, and what you can expect when you come to hospital.

If you have any further questions, please speak to a doctor or nurse caring for you.

What is a coronary angiogram?

A coronary angiogram (or cardiac catheterisation), is a procedure that allows your doctor to look inside your coronary arteries (the vessels that supply blood to the heart muscle) to see if there are any narrowings or blockages. It provides important information about the structure and function of the heart. The procedure uses X-rays and a special dye (called 'contrast') added to the blood.

Why am I having a coronary angiogram?

Coronary angiograms can be used to help diagnose heart conditions, plan future treatment and carry out some procedures. It can also give information about how effectively your heart is pumping, and about the blood pressure inside your heart. An angiogram can also be helpful for investigating other conditions, such as congenital (inherited) heart disease. It may be used after a heart attack, to help diagnose angina (chest pain caused by restricted blood supply to the heart) or before surgery or procedure. It is considered to be the best method of diagnosing coronary artery disease.

How can I prepare for a coronary angiogram?

You should continue to take your regular medicines as usual. We will tell you in your admission letter if you need to adjust the dose or stop taking any of them temporarily. In particular, you may need to stop taking or adjust your doses of:

- anticoagulation medicines (including warfarin and the newer oral anticoagulants (NOACs), for example rivaroxaban)
- metformin-containing medicines and other medicines for diabetes (including insulin).

If you take any of these medications but have received no instructions, **please contact the admissions office on 020 1788 8005** for further information.

Please bring all of the medicines that you currently take or use with you, including anything that you get from your doctor on prescription, medicines you have bought yourself over the counter, and any alternative medicines, such as herbal remedies.

You should have a light breakfast **before 6am** on the morning of your procedure but you must not eat after that. You can drink fluids freely.

You need to have a shower or a bath on the morning of the procedure to reduce your risk of infection.

Giving my consent (permission)

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves.

If you would like more information about our consent process, please speak to a member of staff caring for you.

What happens during a coronary angiogram?

The procedure is carried out in a cardiac catheter laboratory. It will take approximately half an hour if you are not having any further treatment (such as a stent being inserted) at the same time. You will need to lie flat on a table for at least this length of time.

You will have some local anaesthetic via an injection. We will then make a small cut in your wrist or groin and insert a hollow tube called a sheath. A long, thin, flexible tube (catheter) is then passed through the sheath and into a blood vessel. Using X-ray images as a guide, we will pass the tip of the catheter up to the heart and coronary arteries. We will inject a dye called 'contrast medium' into the catheter and take X-ray images (angiograms), which will show if your coronary arteries are narrowed anywhere, and if so, where. This catheter will then be removed.

You will be awake during the procedure. We may give you a light sedation and pain relief.

Will I feel any pain?

A coronary angiogram is not a painful procedure, although it may at times feel a little uncomfortable and you may experience some slight chest pain. If you do experience any pain or feel unwell please let the team looking after you know straight away.

What happens after a coronary angiogram?

After your coronary angiogram, we will look after you in the recovery unit before we transfer you back to the ward. We will check and record your pulse and blood pressure during this time.

If the catheter was inserted into your groin, a nurse may apply pressure for up to 10 minutes to stop the bleeding after the catheter and sheath have been removed. This can sometimes be uncomfortable. Sometimes the doctor carrying out the procedure will insert a small surgical plug to seal the wound, or a special stitch or other closure device, in which case it will not be necessary to apply pressure to the wound. You will be asked to lie flat until any bleeding has stopped. If all is well, you will be asked to sit up after a few hours and you should be able to get up and walk around shortly after. You can eat and drink as normal after your procedure.

If the catheter was inserted into your arm, we may place a small pressurised cuff around your arm, and decrease the pressure gradually over the course of several hours. A nurse will check whether there is any bleeding at the point where the catheter was inserted. You should be able to sit up straight away, and you may be able to walk around soon afterwards if the catheter was inserted into your arm.

You should tell the healthcare professionals treating you if you feel unwell at any time after the procedure.

When planning your journey home, please be aware that we advise you not to drive for two days.

What do I need to do after I go home?

We will give you a leaflet called **Going home after your coronary angiogram** which will explain in detail what you should and should not do when you are discharged and at home. Your nurse will also give advice.

Will I have a follow-up appointment?

The doctor will give you the results of your angiogram while it is going on, or while you are recovering. We will advise you on whether or not you need any further treatment or follow-up appointments, and roughly how long these should be. Please ask if you are not sure of this before you leave.

What are the risks?

A coronary angiogram is generally considered to be a safe procedure. However, as with all medical procedures, there are some associated risks. These include the following –

- Bruising or bleeding under the skin at the wound site, known as a haematoma. This may take up to a couple of weeks to heal, and may cause some tenderness or discomfort.
- Damage to the artery at the wound site, sometimes known as a false aneurysm. You may need another procedure to fix this and it could increase your length of stay in hospital. This is uncommon but is more serious.
- Allergic reaction to the contrast dye. It is important to discuss any allergies you do have with your cardiologist or nurse, including food groups.

There is a very small chance of a serious complication as a result of a coronary angiogram, and these include the following:

- Damage to one of the coronary arteries, or a heart attack caused by blocking off one of the arteries. We would try to repair the artery during the procedure, but in some cases emergency heart bypass surgery may be needed.
- A stroke caused by a small blood clot being displaced and travelling to the brain.

These risks are considered rare, but they are very serious and in very rare circumstances may be fatal.

The risks are higher for those who are already unwell, or who have lots of other health problems or severe heart disease. Please note there may be risks associated with **not** having the procedure, such as not investigating or treating your heart disease. This is something your cardiologist will have considered. They will discuss your risks with you prior to the procedure.

Are there any alternatives?

There is an alternative way to carry out a coronary angiogram, using computerised tomography (CT). A CT coronary angiogram also shows the blood flow through the coronary arteries (similar to a traditional coronary angiogram). However, in this test the dye is injected into a small vein in your arm rather than an artery in your groin or wrist. This makes the test less invasive than a traditional angiogram. A CT coronary angiogram is generally not as effective at detecting areas that have narrowed in small coronary arteries or in small branches. The standard coronary angiogram is still the best way of diagnosing coronary heart disease. Your doctor will discuss with you the particular risks and benefits of each.

Appointments at King's

We have teamed up with King's College Hospital in a partnership known as King's Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at King's. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

Contact us

If the date of your admission is not convenient, please contact Cardiac Admissions:

t: 020 1788 8005 (9am–5pm Monday–Friday)

The cardiac rehabilitation team are available for further support or to answer questions or concerns about having a coronary angiogram

t: 020 7188 0946 (9am–5pm Monday–Friday)

Useful sources of information

If you would like more information on this or any other issues relating to heart disease, please contact the **British Heart Foundation**:

t: 08450 708070 (information line)

w: www.bhf.org.uk

We may be able to provide you with information about local support groups or groups in your area. Please ask if this is something you would be interested in.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints) **e:** complaints2@gstt.nhs.uk

Language Support Services

If you need an interpreter or information about your care in a different language or format, please get in touch:

t: 020 7188 8815 **e:** languagesupport@gstt.nhs.uk

NHS 111

Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.

t: 111

NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

w: www.nhs.uk

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