



A lifetime of specialist care

Royal Brompton & Harefield **NHS**
NHS Foundation Trust

Harefield Hospital

Your coronary angiogram





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This leaflet gives general information about your coronary angiogram. It does not replace personal advice from a healthcare professional. If you have any questions, please ask your doctors and nurses.

What is a coronary angiogram?

A coronary angiogram is a test to look at the main blood vessels that supply the heart with blood and oxygen. These blood vessels are called the coronary arteries.

An angiogram shows your doctor how well your heart is working, and the exact location and seriousness of any narrowed areas in your coronary arteries.

Narrowing of the arteries is caused by a build-up of a fatty substance, called atheroma.

A thin tube, called a catheter, is inserted into an artery in your wrist or groin. The catheter is directed through your arteries to your heart using X-ray images. Then a special dye is injected through the catheter, so the coronary arteries show clearly on the X-ray.

Benefits of a coronary angiogram

A coronary angiogram gives a better understanding of your heart, and helps your doctor plan the best treatment for your condition.

Risks of a coronary angiogram

All medical procedures carry some risk. An angiogram is a relatively safe test. Less than 1 in 1,000 people (<0.1%) have a serious complication as a result of having a coronary angiogram.

The risks depend on your overall health and the condition of your heart. Your doctor will discuss the risks with you.

Minor complications

Inserting the catheter causes bruising in 1 in 10 people (10%). Sometimes the bruising is painful for a few days, but it will disappear with time. Blood may build up under the skin to form



a lump (haematoma). The haematoma will gradually disappear and does not normally need any treatment.

Removing the catheter can cause bleeding in 1 in 100 people (1%). Bleeding is controlled by applying firm pressure.

Vasovagal attack (fainting) is caused by a drop in blood pressure and heart rate, and affects 1 in 100 people (1%). Feeling faint is treated by lowering the head of the bed, or raising your feet, and giving medication (drugs). Intravenous fluids (fluids given straight into a vein) can increase the heart rate and raise the blood pressure.

Development of an abnormal heart rhythm affects less than 1 in 100 people (<1%). If treatment is needed, an electrical shock to the heart restores the heart's normal rhythm.

Major complications

Some people may experience an allergic reaction to the dye used to show the blocked arteries. Allergic reactions can be treated with intravenous medication.

The angiogram may cause damage to a coronary artery, causing it to suddenly narrow or block. This is known as a myocardial infarction (heart attack) and affects less than 1 in 500 people (<0.2%). Damage to the artery can be treated by:

- inserting a catheter, with a tiny balloon at the end, into the artery and inflating the balloon to open the blockage. This is called an angioplasty.
- using another vein or artery as a bypass to re-direct blood around the blocked arteries. This is called a coronary artery bypass operation.

The catheter may cause a small tear in one of the chambers of the heart, in 1 in 1,000 people (0.1%). This can lead to blood collecting around the heart. The blood may need draining, using a small tube inserted below the breastbone, or with an operation.

Damage to the radial (wrist) or femoral (groin) artery leading to bleeding or blockage of the artery affects 1 in 1,000 people (0.1%). This would probably need an operation to correct the damage. Very rarely, the lack of blood supply may lead to the loss of a limb.

Less than 1 in 100 people (<1%) have a stroke as a result of having an angiogram. The risk increases with age. Strokes associated with angiography are usually small and complete recovery is expected.

The dye could affect your kidney function, but the risk is very low if your kidney function is normal before your coronary angiogram. If your kidney function is abnormal before your angiogram, we will give you fluids to protect your kidneys.

In less than 1 in 100 people (<1%) the artery where the catheter was inserted does not heal completely. This can be at the radial artery or the femoral artery, depending on where the catheter was inserted. This can lead to a bulging (swelling) in the wall of the artery, called a femoral or radial aneurysm. If you have an aneurysm, you may need an operation to repair it, which means staying in hospital for a few more days.

Less than 1 in 1,000 people (<0.1%) die during a coronary angiogram, as a result of their heart condition or other complications.

If you have any questions about these risks, please ask your doctor.

Alternative tests

A coronary angiogram is the best way of finding out exactly where the narrowed areas in the coronary arteries are. An angiogram is an essential test if you are going to have surgical or catheter treatment for your coronary artery disease.

Other tests, such as a perfusion scan, an MRI (magnetic resonance imaging) scan or an exercise test, can tell us if you have coronary artery disease, but cannot show where and how severe the narrowed areas are.



If you have any questions about your treatment options, please talk to your doctor.

Female patients

A coronary angiogram uses X-rays that may be harmful to an unborn baby.

If you think you may be pregnant, please contact the cardiac co-ordinator on **01895 828 963**.

If you have not had a period in the 10 days before your coronary angiogram, we will carry out a pregnancy test when you come in to hospital.

Having a coronary angiogram

Before your angiogram

We will need to check your general health and fitness before your angiogram. The pre-admission appointment is usually carried out by telephone, or you may need to attend the Woodlands pre-admission unit at Harefield Hospital.

We will need some up-to-date blood test results prior to your angiogram. We may be able to get these from your GP if they have done some tests recently. If not, we will ask you to visit the pre-admission unit to have a blood test. Some patients will need to have a test for MRSA (methicillin resistant staphylococcus aureus). MRSA is a common infection. We will let you know during your appointment if you need to be tested. If you have MRSA, we need to treat it before your angiogram.

You will receive a separate letter with the date and time for your admission. This is usually two to four weeks after your pre-admission clinic appointment.

After your health checks are finished, we will let you know if we need to make any changes to your admission plan. If we need to delay your coronary angiogram for any reason, we will explain what happens next.

Preparing to come into hospital

Medication

The nurse at your pre-admission appointment will give you advice on your medication.

Please bring all your medication with you to your pre-admission appointment and when you come into hospital for your angiogram. This includes any medication you take for other conditions, such as inhalers.

On the day of your angiogram, you should take all your other usual morning medication, except for any medication we have asked you to stop (see below).

If you have any questions about your medication, please ask your doctor, nurse or pharmacist.

Warfarin and other blood thinning drugs

You may need to stop taking warfarin and other blood thinning drugs before your angiogram. Your doctor will discuss this with you. The nurse at your pre-admission appointment will tell you when to stop taking these medications.

Metformin

Please stop taking metformin 48 hours before your angiogram. You should start taking it again 48 hours after your angiogram.

Diuretics (water tablets)

The coronary angiogram may take up to an hour, so you may prefer to stop taking any diuretics (water tablets) on the day of your angiogram.

Eating and drinking

Your confirmation letter has instructions about eating and drinking before your angiogram. Please follow the instructions.

You may drink water until it is time for your angiogram. During



your pre-admission appointment, we will remind you when you can eat and drink.

Shaving

Please do not shave or remove hair from your chest, arms, legs or groin before coming into hospital. If needed, shaving will be done in hospital just before your angiogram.

Hygiene

It is extremely important that you have a thorough shower or bath the night before you come into hospital. Please pay special attention to washing under skin folds such as under the breasts, the groin and genital area. We will send you an antiseptic body wash to use the night before and the morning of your admission.

What to bring to hospital

Remember to bring:

- your completed hospital forms
- all your medication
- a dressing gown
- slippers that fit well and have a good grip
- something to read.

Appointment date

If you have any questions about your appointment date, or you need to change the date, please contact the cardiac co-ordinator on **01895 828 963**.

Bed confirmation

Your admission letter will tell you which ward to go to. You will have your angiogram on the Cherry Tree day case unit or the acute cardiac care unit (ACCU).

If you are going to ACCU, please call the ward before you leave home to make sure a bed is available.

If you are going to the Cherry Tree day case unit, you do not need to call to make sure a bed is available.

Arrangements for going home

You will need to arrange for someone to take you home after your angiogram, as you will not be able to drive for the first 24 hours.

Arriving at hospital

Please go to the main reception and ask for the admission office. An admissions officer will process your paperwork and direct you to the ward.

On the ward

When you get to the ward, a nurse will show you your bed/armchair, where you will wait for your angiogram.

Male and female patients may share the same ward, but will have separate bays and bathrooms. There are exceptions. For example, in intensive care and high dependency areas, male and female patients may be cared for in the same bay.

We try to keep waiting times to a minimum, but sometimes there are delays when other patients need to be seen in an emergency. We will keep you informed of any changes.

If you have any questions, please ask the ward manager or matron.

What happens during your angiogram?

You will have your angiogram in a cardiac catheterisation laboratory (cath lab). The angiogram takes about 30 minutes to one hour.



A local anaesthetic is injected in your wrist or groin, to numb the skin. Then a small cut is made, to insert a catheter.

If you feel anxious you can have a sedative. A sedative is a drug that calms you down.

The doctor inserts the catheter into the artery and pushes it gently towards the heart. The doctor watches the catheter on a TV monitor, using a low dose X-ray. This is called fluoroscopy.

When the catheter reaches your heart, the doctor injects a special dye into the arteries. The dye shows any narrowed areas or blockages in your arteries on the X-ray.

When the dye is injected, you may have a hot flushing sensation for a few seconds. You may also feel an occasional missed or extra heartbeat, but you should not have any pain.

We will take a few X-ray images. The doctor may also ask you to take a few deep breaths and to hold your breath.

If you sometimes get angina (pain in the heart), you may have chest pain during the angiogram, but it should be no worse than usual.

During the angiogram, we will use a heart monitor to check your heart rate and rhythm. If you have new pain or other symptoms, such as shortness of breath, please tell the doctor or nurse.

When we have finished taking the X-ray images, we will remove the catheter.

You will have small wound in your wrist or groin, where the catheter was removed. The doctor will apply firm pressure to stop bleeding from the wound.

If your angiogram is carried out through your wrist, the doctor may put a band, called a TR band, on your wound. The TR band is inflated with air, to stop bleeding.

If your angiogram is carried out through your groin, the doctor may use a small plug, called an angioseal, to stop bleeding. The angioseal is made of collagen and is absorbed by the body over 90 days.

After your angiogram

After your angiogram, we will take you back to the ward. You will need to rest in bed or in an armchair for one to two hours, and you can have some food and drink when you feel ready.

If you have a TR band, the nurses will gradually remove the air, and then remove the band, and apply a dressing.

The nurses will also monitor your pulse and blood pressure.

You will need to stay in hospital for at least two hours after your angiogram.

We expect you to get up, dressed and moving as soon as possible after your procedure. Being active will help you to recover more quickly.

Visiting times

If you are in the Cherry Tree day case unit, a family member or close friend can stay with you the whole time. If you are in ACCU, you can have visitors between 3pm and 8pm every day.

We ask that you only have two visitors at a time on Cherry Tree and ACCU.

Your test results

Your cardiologist will look at the X-ray images and may suggest one of the following:

- no further treatment, as your arteries do not have any significant narrowing

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- carry on with your current medication
 - treatment to widen your coronary artery using coronary angioplasty and/or a stent. Please ask for the leaflet 'Your coronary angioplasty'.
 - surgery to redirect blood around the blocked arteries, by using another vein or artery. This is known as a coronary artery bypass graft. Please ask for the leaflet 'Your heart surgery'.

If you need further treatment, your cardiologist will discuss this with you.

Going home

You will be able to go home on the same day of your angiogram. Occasionally you will need to stay overnight and will go home the next day.

Before you go home, we will ask you to walk up and down the ward several times to make sure that the wound in your wrist or groin has healed well enough.

You will have a dressing on your wound when you go home. You can take the dressing off the next day.

If you have any questions when you are at home, please contact the Cherry Tree day case unit or ACCU. The contact details are at the end of this leaflet.

If you feel you need treatment urgently, please contact your GP, or go to the nearest accident and emergency (A&E) department.

Please remember that Harefield Hospital does not have an accident and emergency (A&E) department.

Getting back to normal

We will give you a leaflet called 'After your angiogram or angioplasty' that gives more information about your recovery.

Work

It is normal to have one to two days off work after your angiogram. Please discuss this with your doctor or nurse.

Exercise

Do not do any exercise for two days after your angiogram, while the wound in your wrist or groin is healing.

After two days you can build up exercises gradually, but rest after exercise and avoid heavy lifting.

You should be back to normal in four to five days. If you have any questions about exercise, please ask your doctor or nurse.

Hygiene and wound care

You may have some bruising and a little tenderness around your wound. Remember to keep the wound clean and dry. It is ok to have a shower, but do not have a bath for 24 hours after your angiogram.

Driving

You must not drive for 24 hours after your angiogram.

Follow-up

If you need a follow-up appointment or further treatment, we will tell you approximate timings for the appointment before you leave hospital. You will get a letter with the date and time.



Useful contacts

ACCU	01895 828 667 or 01895 828 648 (24 hours)
Woodlands pre-admission unit	01895 828 827 Monday-Friday, 8am-4pm
Woodlands answer machine	01895 828 729 (24 hours)
Cherry Tree day case unit	01895 828 658 Monday-Friday, 7.15am-8pm
Cardiac rehabilitation nurses	01895 828 944 Monday-Friday, 8am-4pm

If you have concerns about any aspect of the service you have received in hospital and feel unable to talk to those people responsible for your care, call the Patient Advice and Liaison Service (PALS) on 01895 826 572 or email pals@rbht.nhs.uk. This is a confidential service.

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Middlesex
UB9 6JH
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Website: www.rbht.nhs.uk

إذا كنت ترغب في الحصول على ترجمة فورية لمضمون هذه الوثيقة إلى اللغة العربية، يرجى منك الاتصال بأحد مستخدمينا بجناح المصلحة التي يتم فيها استشفائك. أحد موظفينا سيسعى لترتيب إجراءات الترجمة وإتمامها في الوقت المناسب لك.

Brosurteki bilginin Türkçe tercemesi için tedavi görüyor olduğunuz bölüme bas vurunuz. Bölüm personeli tercemenin gerçekleşmesini en kısa zamanda ayarlayacaktır.

