



Royal Berkshire
NHS Foundation Trust

Coming in for a diagnostic coronary angiography

Information and advice for
patients

Jim Shahi Unit

Tel: 0118 322 6502

You have been put on the waiting list to have a coronary angiogram at the Royal Berkshire Hospital. This leaflet outlines information and advice you should follow to help understand this procedure.

What is diagnostic coronary angiography?

A coronary angiogram is a specialized x-ray test to find out detailed information about your coronary arteries. The test will give us precise information about your heart's blood supply, allowing us to better understand your condition and the most effective way of treating it.

Why do I need a coronary angiogram?

The three main reasons for carrying out this test are:

- Confirming your diagnosis – to find out for certain whether your symptoms are because of a problem with the blood supply to your heart.
- Guiding your treatment – to see whether your symptoms are best dealt with by tablets or can be more effectively treated with angioplasty and stent (a balloon stretch of a narrowed artery with a metal stent placed to keep the artery open) or even a bypass operation.
- Ensuring your safety – to be certain that the blood supply to your heart is not so restricted that it would be life-threatening without treatment.

What are my treatment options?

The cardiologist (heart doctor) who carries out the angiogram will discuss the results with you later in the day, before you go home. Our specialist nurses will also be happy to answer any questions and explain your future treatment.

The angiogram may show that your arteries are clear or that you are fine just to continue with medication. In some cases, the findings may suggest that you might be helped by an angioplasty procedure, or that a bypass operation is the best treatment for you.

How is the angiogram carried out?

Coronary angiography is done as a day-case procedure in the Jim Shahi Unit at the Royal Berkshire Hospital. You will be looked after during the procedure by one of our specialist nurses.

The test is done under local anaesthetic – an injection is given into your groin or wrist so it will not hurt when a catheter (tube) is passed into the blood vessel. The catheter is inserted through a small plastic tube which is placed into a blood vessel in the groin or arm. The doctor gently pushes the catheter up the blood vessel towards the heart. The tip of the catheter is pushed just inside a main coronary artery. Some dye is then injected down the catheter into the artery. Several x-ray films are rapidly taken as the dye is injected (the dye shows up clearly on x-ray films). The x-ray films are recorded as a moving picture and this is called an angiogram. The angiogram shows the vessels filling with blood and the sites of any narrowing can be seen.

The angiogram usually takes between 10 and 20 minutes and you will be awake throughout. If the procedure is performed in the arm you will return to the ward with a pressure band around your wrist. If it is performed in the groin the nurse will remove the tube from your artery and will press the site for about 10 minutes to make sure there is no bleeding.

What are the risks?

You may feel an occasional 'missed' or 'extra' heartbeat during the procedure. This is normal and is nothing to worry about. You should expect to feel a little sore for a day afterwards and you may experience some bruising.

The test is very safe, however, there are possible complications associated with this procedure:

Minor risks

- Damage to the femoral artery (where the tube is inserted at the top of the leg).
- Developing abnormal heart rhythms.

- Worsening of kidney function if this is already abnormal.
- Allergic reaction to contrast dye.

Major risks

- Damage to one of the coronary arteries causing it to narrow or block (less than 1 in every 500 patients).
- Having a stroke (less than 1 in every 500 patients).
- Death (less than 1 in every 1000 patients).

You will have the opportunity to discuss any risks or concerns with the doctor on the morning of your test before you give consent.

You should not drive after the procedure so please make sure you arrange for a responsible adult to accompany you home. We recommend that people do not drive or go back to work the day after the procedure.

Before the procedure

You will be asked to attend the Jim Shahi Unit on Level 1 Battle Block at the Royal Berkshire Hospital. Information on car parking and the layout of the hospital is included in the *Getting to the Royal Berkshire Hospital* leaflet. If someone is accompanying you, they will be asked to contact the ward later in the day to find out your estimated time of discharge.

CLEAR WATER IS PERMITTED BEFORE YOUR PROCEDURE.

- Please wear one layer of light clothing over your underwear, e.g. T-shirt or short sleeved shirt or blouse and casual trousers/jogging pants. Please ensure this garment is plain, free from metal attachments or design and of low cost to yourself, as it may get damaged during your procedure.
- You may remain in this clothing throughout your stay. Ladies are required to remove their bra.
- Please bring any regular medication in its original packaging with you.

- If you are taking *Warfarin*, Dabigatran, Apixaban or Rivaroxaban you will be advised what to do about this before the procedure.
- If you are taking diuretics (water tablets), do not take any on the morning of the procedure.
- If you are taking diabetic tablets you may continue to take these on the morning of admission with the exception of Metformin which must be stopped 48 hours before and 48 hours after the procedure.
- If you use insulin take 1/3 less of your evening dose the day before, omit your insulin on the morning and take it after the procedure once you are eating and drinking. Please tell the staff that you use insulin as soon as you arrive at your appointment.
- Other tablets can be taken as normal.
- Tell the nurse if you have allergies or if there is a chance that you are pregnant.
- The Jim Shahi Unit is an emergency department and there maybe unforeseen delays. Please bring something to read or occupy your time.

Just before the procedure

- On arrival, a nurse will check your name and details.
- We will tell you again what will happen during the procedure and the doctor will ask you to sign a consent form.
- Your nurse will accompany you to the catheter laboratory (where the angiogram is done).

What happens during the procedure?

- You will be asked to lie on the x-ray table.
- Monitoring leads will be attached to your arms and legs to watch your heart rate.
- The nurse will clean your skin with antiseptic and cover you with sterile towels.
- The doctor will inject some local anaesthetic, into your groin or wrist, which will make the area sting to begin with, but will then go numb.

- You may feel a pressure as the catheters (tubes) are put into position.
- You may also experience a warm feeling when the contrast (dye) is injected.
- The x-ray machine will move in different positions to take the films.
- The whole procedure takes 10-20 minutes.
- If you experience any discomfort or are worried about anything during the procedure, please tell someone straight away.

After the procedure

- If the angiogram is performed in the groin you will be moved onto a trolley and taken back to the ward.
- The ward nurse will remove the tube from your femoral artery and will press firmly over the area for 10-15 minutes until the bleeding has stopped.
- You will have to remain in bed initially. You will have to lie flat for one and a half hours after the tube has been removed. You will then sit up for half an hour in bed and then another half an hour in a chair. The nurse will then encourage you to begin walking around and to drink plenty of fluids to flush out the dye used during the procedure.
- If you have the procedure performed in the arm you will have the pressure band on for 1-2 hrs. You can eat, drink and mobilise straight away.
- The nurse will check the puncture site (where the tube went into your body) frequently, together with your pulse and blood pressure.
- If you notice any bleeding from the puncture site, you should tell someone straight away.
- Provided all is well, you will be allowed to go home later in the day. You must be collected from the unit by a responsible adult and you must not drive.

Follow up

Once the cardiologist has discussed your results with you (before you go home) you will have more idea of what future treatments, if any, you will need. Then, if necessary, a further appointment will be made for the relevant treatment.

Useful contacts

Royal Berkshire Hospital	0118 322 5111
Jim Shahi Unit	0118 322 6502
Cardiac Appointments	0118 322 6676
Cardiac Support Nurses	0118 322 6638
Cardiac Care Unit	0118 322 6684
Trust website:	www.royalberkshire.nhs.uk
NHS 111:	111
NHS website:	www.nhs.uk
British Heart Foundation:	www.bhf.org.uk

West Berkshire Heart Support Group – ‘Heartbeats’

The local heart support group hold regular monthly meetings in Reading, Earley and Newbury. For details see Heartbeats magazine, posters or ask nursing staff for details. www.heartbeats-berkshire.co.uk

Cardiac Fund

The Cardiac Fund was set up with the purpose of providing cardiac services which may not otherwise be available through NHS resources. Our Cardiac Laboratory (Jim Shahi Unit) was largely equipped through the fund and many other areas in the department have also benefitted from equipment and staff training. In order to expand these facilities and to remain up to date with the technological advances, further donations are greatly needed and appreciated.

How to donate

You can donate to the Cardiac Fund U226 in a number of ways (please ensure you quote the fund code U226 when making a donation):

- Cheques: Please make your cheques payable to the 'Royal Berks Charity Cardiac Fund U226 and post to: Royal Berks Charity, South Block Annexe, Royal Berkshire Hospital, London Road, Reading RG1 5AN. Please include your address details so we can acknowledge receipt of your donation and, if applicable, we can send you a Gift Aid form to further boost your donation if you are a UK taxpayer.
- Cash: If you wish to donate by cash, please bring your donation directly to the Charity Office or leave with Main Reception along with your contact details. The Charity Office is located upstairs in South Block Annexe.

For safety reasons, please do not send cash in the post.

- Credit and debit card: We accept donations through all major credit and debit cards. Please call us on 0118 322 8860 and quote Cardiac Fund U226.
- Online: To donate please visit www.royalberkshirecharity.co.uk and click on the 'Donate' button. In the message box please quote Cardiac Fund U226.



This document can be made available in other languages and formats upon request.

Written by the Department of Cardiology

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