

can briefly sting before the area becomes numb. Once the anaesthetic has been injected, the procedure is usually pain-free although some people experience mild discomfort. If you request it, the team will also give you a sedative injection to make you calm and drowsy.

- The team will then insert a narrow tube (called a catheter) through your blood vessel to reach the heart. They will inject a special dye into the heart arteries which helps them see your heart arteries with X-ray pictures.
- After the pictures are obtained, the catheter is removed and the access site in the wrist or the top of the leg is usually closed with a small bandage or closure device.

Healing

After the procedure, your healthcare team will monitor you in a recovery area or the ward for a few hours. You'll need to rest for a while. You may have a dressing over the area where the tube was inserted. You will need to arrange for someone to drive you home after the procedure.

It is normal for the area where the tube was inserted to feel uncomfortable for a few days. It is also normal for a bruise to develop, but this should not increase significantly in size. A bruise can take several days to fade. Keep taking any medicines you have been told to take, unless you are advised to stop (or pause) them.

Your healthcare team will advise you about:

- How long you need to keep the dressing on
- Washing, although most people can usually wash as normal after a day or two.
- When you can restart activities like heavy lifting or exercise
- Any other restrictions

Once your doctor has received the results of the procedure, they will discuss these with you and explain how this will guide their recommendations for treatment and care of your heart problem.

What are the risks of coronary angiography?

Coronary angiography is a routine procedure that usually goes smoothly. However, no procedure is 100% safe. Before recommending coronary angiography, your healthcare team will consider both the benefits and the risks in your particular case.

The most common side effects are discomfort and bruising at the injection site (wrist or leg) and minor bleeding. There can be more serious risks, like moderate-to-severe bleeding, damage to the blood vessels, an allergic reaction to the dye and problems with the heart or kidneys, which are all rare. The healthcare team will explain all the risks to you and you should feel free to ask them any questions.

When to seek medical assistance afterwards

Contact your doctor if you experience any of the following after the procedure:

- Major bleeding or swelling
- Possibility of an infection at the catheter insertion site
- Chest pain or discomfort
- Numbness or coldness in the arm or leg on the side of the tube insertion

Any questions or comments?

If you have other questions that we haven't covered then please ask the healthcare team looking after you. Unfortunately, NW Hearts Charity can't answer questions about your own health situation.

If you have any comments about this leaflet (good or bad), then please contact office@nwhearts.org

NW Hearts Charity always welcomes feedback about how we are doing and how we might improve.

Disclaimer: NW Hearts Charity hopes that anyone reading this information finds it helpful. However, this is general information and does not replace medical advice, diagnosis or treatment. Please speak to your healthcare professional if you have any questions about your health. So far as is permitted by law, NW Hearts Charity does not accept liability in relation to the use of any information published by us.



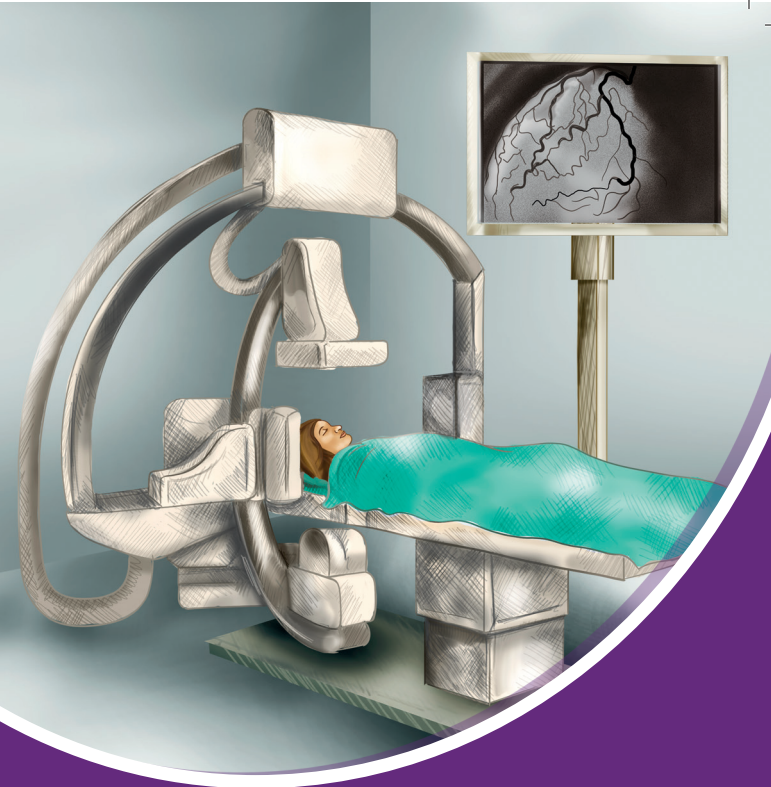
Patient information
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Coronary Angiography

Patient information leaflet



NW Hearts Charity

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What is coronary artery disease?

Coronary arteries are the main pipes (blood vessels) that form the plumbing system of the heart. This blood supply carries oxygen that the heart needs to pump normally.

Over our lives, fatty cholesterol deposits can build up in the lining of coronary arteries, making them narrower. This is called coronary artery disease.

Symptoms of coronary artery disease

Many people with coronary artery disease will have no symptoms, especially if the arteries are only slightly narrowed.

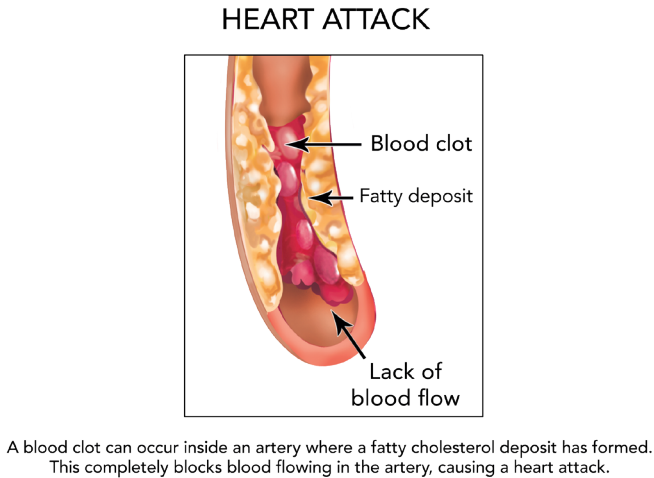
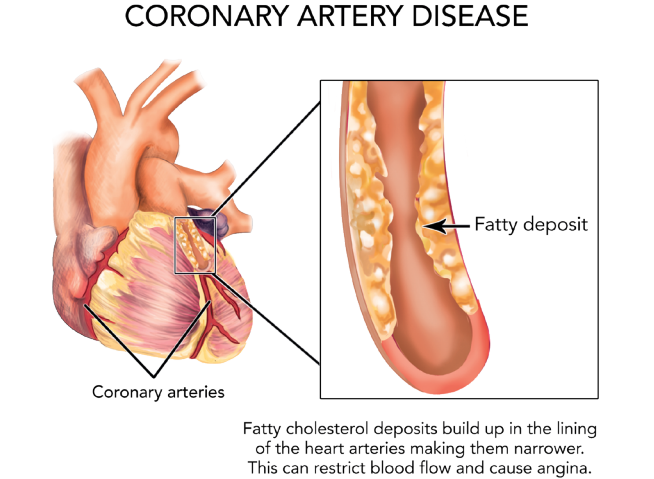
If the arteries become too narrow, the blood supply to the heart becomes restricted, meaning that the heart may not get enough oxygen. The heart muscle starts to get stressed and may send out pain signals.

The pain is called angina and tends to develop during exercise or physical activity. It is often felt in the chest, but it can also feel like discomfort in the arm, jaw, or back. Resting usually helps.

Angina can feel similar to a heart attack, where a coronary artery becomes fully blocked by a blood clot. However, with a heart attack, the symptoms do not normally go away with rest and can last longer than 15 minutes.

- Other symptoms of a heart attack include:
- Shortness of breath
 - Cold sweats
 - Nausea or vomiting
 - Lightheadedness or dizziness
 - Feeling that something bad is going to happen

Important note: If you think you might be having a heart attack, don't wait. Call for help immediately by dialling 999.



What is coronary angiography?

Coronary angiography is a procedure that takes detailed pictures of the coronary arteries using X-rays. It examines the blood flow to your heart, looking for signs of narrowing or blockages.

Coronary angiography is a diagnostic procedure, which means that it is done to gather information about what may be wrong with your heart, rather than to treat a heart condition. This information helps doctors to decide which type of treatment might be best for you.

When is Coronary Angiography needed?

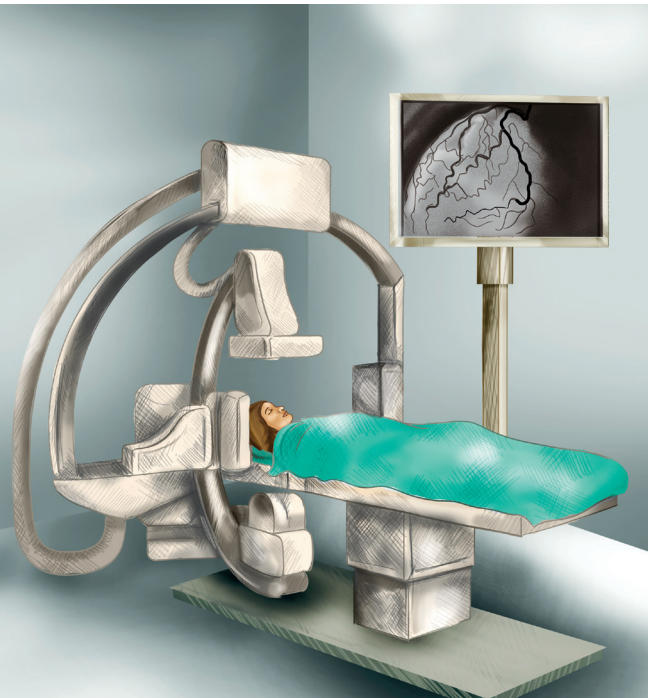
- Coronary angiography is usually needed for the following reasons.
1. Investigating symptoms that could be caused by narrowed or blocked heart arteries to confirm the diagnosis of coronary artery disease.
 2. When doctors know the symptoms are due to coronary artery disease, but need further information to help guide the best treatment plan
 3. If you need major heart surgery such as heart valve surgery, coronary angiography is often done beforehand, to see if the coronary arteries need treating at the same time as the surgery.

Some people need an urgent coronary angiogram if they are having a heart attack or if they have had a recent heart attack. When this is carried out, the medical team may also open up the blockage using a balloon catheter (soft tube with a balloon at its tip that inflates) and sometimes also insert a stent (firm hollow tube) to restore blood flow. These treatments are covered in other NW Hearts Charity leaflets. The rest of this leaflet discusses coronary angiography only.

What preparation is needed?

Please make sure you have nothing to eat or drink for at least 6 hours prior to the procedure. You can still take your usual medications, with a small sip of water.

Dress in comfortable clothes that you can easily take off and put back on. You may wish to bring a dressing gown, shawl or blanket and something to read whilst you are waiting. If you use a walking aid, please bring this with you if you feel you might need it. It is also helpful to bring a list of your usual medications with you to the hospital.



What should I expect on the day of the procedure?

Coronary angiography is usually a straightforward day case procedure, which means you won't have to stay in hospital overnight.

When you arrive at the hospital, a nurse will ask you to change into a gown, ask you some general questions and put a small needle (cannula) into your arm. A doctor will ask you to sign a consent form for the procedure, which means that you understand why you are having the procedure and what the risks are.

Coronary angiography is performed in a special X-ray room called the cardiac catheterization laboratory (cath lab) and usually takes around 30 minutes. The procedure typically involves the following steps:

- The medical team will numb your wrist or the top of your leg using a local anaesthetic injection. This injection