



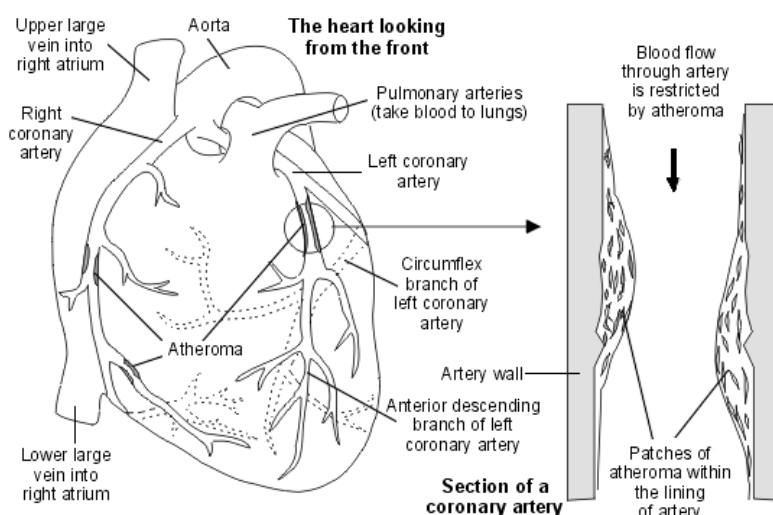
Having an angioplasty and stent (inpatient)

This leaflet should answer some of the questions you may have about having an angioplasty and stent. It is only a general guide and may not answer all of your questions. Please ask the doctors or nurses if you have any particular queries: there is a blank section at the back if you wish to write them down.

What is an angioplasty and stent?

Angioplasty is a procedure that uses a balloon catheter to increase the diameter (width) of stenotic coronary arteries, thus increasing overall blood flow. A stent is a small metal coil/mesh tube that is placed in a narrowed artery via the balloon catheter. A stent aims to hold the artery open and helps to reduce the rate in which the artery can re-narrow.

Angioplasty is not a cure, so it is still necessary to change any unhealthy habits (risk factors) that contribute towards heart disease.



Why do I need an angioplasty and stent?

The heart is a muscle that pumps blood throughout your body, delivering nutrients and oxygen to the tissues. For the heart muscle to work effectively and remain healthy, it requires a good supply of oxygen. This oxygen is supplied to the heart muscle via the coronary arteries.

You will have an angiogram first to determine whether you have any coronary artery disease. If there is a narrowing (stenosis) of one or more of your arteries, a stent may be recommended. The narrowing is often due to the build-up of fatty deposits on the inner walls of the coronary arteries called atherosclerosis.

Percutaneous coronary intervention (PCI), also known as angioplasty, is when a stent is implanted into the affected coronary artery to keep it open.

What happens during the angioplasty?

An angioplasty can take anything between 60-90 minutes.

Angioplasties are performed either through the wrist via the radial artery, or the groin via the femoral artery.

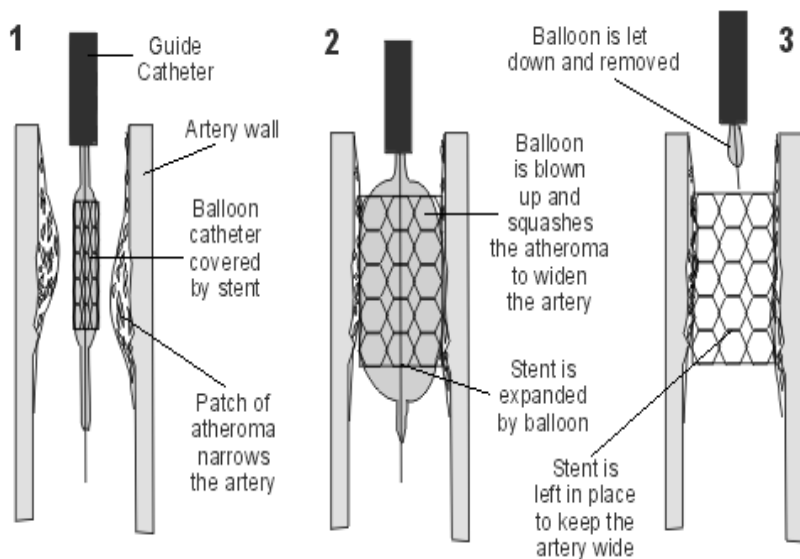
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The procedure is done under local anaesthetic, and sedation may be given to make you feel relaxed during the procedure.



A catheter (small plastic tube) is introduced into the artery, and you may be aware of a pushing sensation as this is done, but it usually does not hurt.

The catheter is moved into the narrowed artery. A guide wire is inserted and positioned through the blockage. The balloon is moved over the guide wire until it is in the narrow segment. Once in position, the balloon is inflated and reduces the narrowing by pushing and compressing the fatty deposits, known as plaque, to the side of the artery wall.

The balloon is inflated and deflated several times; you may feel some chest discomfort during the inflation of the balloon. Under X-ray control, the doctor will check for improvement of blood flow.

Inserting a stent

Once the balloon has compressed the plaque, the stent is carefully positioned and the stent balloon is inflated, causing the stent to expand. The expanded stent further compresses the plaque against the arterial wall. The balloon catheter and guide wires are then removed.

New tissue will slowly grow over the stent. To prevent any clots from forming around the stent, while your own tissue is growing, your doctor will prescribe an anti-platelet medication, for example, Clopidogrel/Ticagrelor/Prasugrel, which you will have to continue taking after your procedure.

After the angioplasty and stent

During the procedure, you will be given a drug called heparin, which helps thin the blood. The blood will return to normal on its own accord. You may hear this referred to as 'clotting time'. If the procedure is done via the groin, a plug is usually used to seal the artery. The plug (angioseal) is made of an animal product. Please discuss with staff if you do not want this so that they can record this on your records. If the procedure is performed via the wrist, a pressure band is secured for 2-3 hours post procedure to stop the bleeding.

Once on the ward the nursing staff will frequently monitor your blood pressure, pulse and check the circulation in either your wrist or leg. You will be restricted to bed rest for approximately 2 hours, however, this may be dependent on your recovery, blood thinners and access (via the arm or leg).

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Follow-up

When you are discharged, you will have a follow up telephone call with the cardiac support nurses, two to four weeks after the procedure. You may also be given an outpatient appointment to be reviewed in cardiology out-patient clinic.

Recognised risks and potential benefits

Angioplasty is a very good treatment for angina in those patients with suitable coronary anatomy. Successful angioplasty should reduce your angina, increase your exercise tolerance and reduce your need for medication for angina.

Nevertheless, as is the case for bypass surgery, it is only a treatment and not a cure for coronary disease. The chance of the angioplasty being successful is over 95%. After successful angioplasty, it is still extremely important to control your known risk factors (e.g. smoking, cholesterol, diabetes and blood pressure) and to continue on medical treatment (e.g. aspirin, B-blocker, statin, ACE inhibitor) as appropriate. We can deal with the narrowing in your arteries but it is **your responsibility to lead a healthy lifestyle afterwards**. Only by doing this can you minimise your chance of further cardiac events in the future.

Angioplasty is very safe; however, there are possible complications associated with it.

Minor risks

- Damage/bleeding to the artery (where the tube is inserted).
- Developing abnormal heart rhythms.
- Worsening of kidney function if this is already abnormal.
- Allergic reaction to contrast dye.
- Re-narrowing of the artery may occur which can usually be treated with a repeat procedure.

Major risks

- Damage to one of the coronary arteries causing it to narrow or block (2-3 in every 100 patients). This may cause a heart attack and may require by-pass surgery.
- Having a stroke (less than 1 in every 400 patients).
- Death (less than 1 in every 400 patients). The risks of angioplasty are less than those of bypass surgery, and the benefits of a successful angioplasty make the risk acceptable in most cases.
- Damage/bleeding to the artery (where the tube is inserted).

The medical staff will discuss possible complications and answer any outstanding queries you may have before the procedure is carried out.

Going home

- **You should not drive for at least one week; however, this can depend on other medical conditions. Please discuss with the cardiology nurses and doctors.**
- It is often possible to return to work after one to three weeks, depending on the type of job you do. If you have had a heart attack, please check with the cardiology staff.
- Please avoid heavy lifting and any other strenuous activity for two weeks.

- It is important you continue to adopt a healthy lifestyle, watch your weight, exercise and eat healthily. If you would like information on any of these subjects please ask the ward staff.

If you have any questions about the information in this leaflet, ask the ward staff or contact one of the cardiac support nurses.

Useful contacts

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

Notes and questions

This leaflet is printed privately for the Cardiac Fund. It was set up in 1976 for the purpose of providing cardiac services that would otherwise not be available through National Health resources. Our Cardiac Laboratory was largely equipped through the fund and many other areas in the Department have also benefited from equipment and staff training.

If you would like to contribute please scan the QR code below to donate direct to the fund online, alternatively, cheques should be made payable to:

The Royal Berks Charity Cardiac Fund U226

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Please ask if you need this information in another language or format.

Department of Cardiology, April 2024

Next review due: April 2026

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