

Interventional Radiology Unit (IRU) Angioplasty and Stents

What is an angioplasty?

Angioplasty is a procedure intended to treat the narrowing or blockage in a blood vessel. A specially trained Doctor called an Interventional Radiologist performs the procedure. A small plastic tube (catheter) is passed into the artery at the groin. A balloon on the end of the catheter is positioned using x- ray guidance and inflated at the site of the narrowing or blockage. The catheter is removed at the end of the procedure.

What is a stent?

A stent is a small metallic tubular mesh designed to keep a blood vessel open; it is inserted into the artery in a similar way to a balloon. The stent is placed accurately within the vessel at the site of the blockage and it expands within the vessel. The catheter is removed and the stent remains in the vessel and becomes incorporated into the wall.

Why do I need angioplasty or stent?

You may have already had an Angiogram / arteriogram, which has shown a blockage in an artery. Arteries are tubes, which carry blood and oxygen around your body. A blockage or narrowing in an artery means that the tissues do not get enough oxygen. This causes a range of symptoms depending on the site and severity of the problem.

The doctors in charge of your case and the Radiologist know that there is a problem with part of your circulation. They will have discussed the situation and feel this is the next best step.

Narrowed or blocked arteries can sometimes be treated by exercise, some by angioplasty/stent and some require surgery. A member of the Interventional Radiology team or the Vascular Surgical team will talk to you about your particular procedure in more detail.

What happens on the day of the procedure?

You may be admitted to one of the surgical wards as an inpatient for the procedure, with the possibility of an overnight stay. If there are any medical or technical reasons you may be admitted the day before the procedure. The Radiologist may have decided that the procedure can be performed as an outpatient. If you can have the procedure as an outpatient you will be admitted directly to the Interventional

Radiology Unit. However, even as an outpatient a period of observation will be required and you will be able to return home later the same day.

You may require blood tests and a cardiogram (ECG) prior to the procedure and these will be done on admission to the surgical ward or the angiography suite.

However if you have attended the Pre-Admission Assessment Clinic prior to admission, these tests will have been done.

What do I need to do before the test?

On the morning of the procedure please follow these instructions:

Diet

- You can eat and drink normally.

Medication

- Most patients may continue to take their usual medication.
- If you have diabetes and are insulin dependent, take your insulin and food as usual.
- If you take tablets for your diabetes please continue to take these.
- If you take drugs that reduce the chance of blood clots (sometimes referred to as “blood thinners”), such as **warfarin, clopidogrel, aspirin, rivaroxaban or dabigatran** and are having the procedure as an outpatient, please contact the Interventional Radiology Unit before your procedure, you may have to stop the relevant drug for a short time before the procedure.
- **If you are being admitted as an inpatient, the nurse in the pre-admission assessment clinic will have given you instructions about stopping your medication.**

Please bring all your medications with you i.e. tablets, inhalers

Allergies / medical conditions

- It is helpful if you tell the Interventional Radiology Unit if you suffer from asthma, hay fever, diabetes, heart or kidney problems.
- You will be asked about any known allergies i.e. drugs, foods and/or other, if you are allergic to x-ray dye (contrast), iodine or latex. Please contact the angiography department in advance as special precautions may be needed.

What does the procedure involve?

Once you arrive in IRU the nurse may ask you to change into a gown for the procedure. You will be asked a series of general health questions as part of a safety checklist procedure. Once the nurse has finished you will meet the Interventional Radiologist performing the procedure, who will go through the risks and benefits of the procedure and ask you to sign a consent form.

You will lie on the x-ray table, usually flat on your back. The Radiologist will keep everything as sterile as possible and will be wearing a theatre gown and operating gloves.

The Radiologist will clean the area of skin with some antiseptic solution; most of your body will be covered by theatre drapes (towel). The Radiologist will inject a local anaesthetic into the skin in the region of the groin to numb the area. After this the procedure should be painless.

A long fine tube (catheter) is then inserted into the artery in the region of the groin, using x-rays to help; the Radiologist manipulates the catheter into the correct position. You will not feel the catheter being moved around your body.

X-ray images (pictures) are taken whilst the dye (x-ray contrast) is injected down the catheter into the blood vessels.

Some injections may cause hot flushing for a few seconds, and an occasional feeling of wanting to pass water. You may feel discomfort as the balloon is blown up or the stent is inserted into position.

Afterwards when the test is completed the catheter is removed and either a special plug will be used to close the hole or pressure will be applied to the groin for about ten minutes to minimise any bruising.

There will be a nurse or another member of clinical staff standing next to you and looking after you throughout the procedure.

What are the risks / complications of angioplasty?

The risks at the time of angioplasty are rare.

- Some degree of bruising is quite common and this normally disappears within a few days.
- Serious bleeding is very uncommon, but should this occur then further procedures such as a blood transfusion or very rarely a surgical procedure to stop the bleeding may be needed.
- Unfortunately in about 10% of cases, angioplasty is not successful and other treatments will need to be considered. In addition, even when angioplasty has been performed, there is a

risk that the area will narrow down again. After one year, about 20% of arteries will have become narrowed again. In some cases it may be possible to repeat the angioplasty at that time, although in others this may not be possible.

- Very rarely, if angioplasty does not work, circulation may worsen and urgent surgery is required.
- Some people can be allergic to the dye, or their kidneys can be affected by the dye requiring further treatment.

The exact risks are different for each patient and will be discussed with you before the procedure at the time of consent.

What are the risks / complications of stenting?

- The risks at the time of the procedure, bruising and bleeding are the same for stenting as for angioplasty.
- In about 1-2% of cases the stent blocks within 24 hours and then you may need further treatment, such as thrombolysis where a drug is given to break the clot down.
- Even where successful stenting has been performed, there is a risk that the area will narrow again.

The exact risks are different for each patient and will be discussed with you in more detail before the procedure at the time of consent.

What happens afterwards?

You will be transferred to a bed and asked to lie flat for up to 4 hours. The total amount of bed rest required varies between patients, but can be overnight. If you are an inpatient you will be returned to the ward.

Day case patients will be allowed home after being seen by the Radiologist. You will be unable to drive yourself home, so you will need to make arrangements to be collected from the Interventional Radiology Unit.

What should I expect afterwards?

- Take it easy for 24 hours.
- Drink plenty of fluids.
- Eat normally.

Seek medical advice if you are worried about anything.

Do not:

- Operate machinery for 48 hours.
- Do any strenuous lifting or exercise for 2 days.
- Drive until the groin feels completely comfortable.
- The DVLA recommends 1 week.

What do I do if the puncture site starts bleeding?

In the unlikely event of bleeding, press the site hard, and tell your relative/carer to contact your GP's surgery or the ward for advice.

Points of contact:

If you have any queries to the procedure outlined in this leaflet and the implications for you or your relatives / carers please contact:

Interventional Radiology Department, Norfolk & Norwich University Hospitals NHS Foundation Trust

Tel: 01603 286690

Surgical Pre-Admission Assessment Clinic, Norfolk & Norwich University Hospitals NHS Foundation Trust

Tel: 01603 287819

Vascular Nurses:

Norfolk and Norwich University Hospitals NHS Foundation Trust

Tel: 01603 28784 or 01603 647972 (Monday to Friday 9am - 5pm)

Vascular Surgeons (Secretaries): Monday-Friday only

Miss F J Meyer 01603 287136

Mr M P Armon 01603 287552

Mr D R Morrow 01603 286442

Mr R E Brightwell 01603 287394

Mr M S Delbridge 01603 286434

Mr P C Bennett 01603 286263

Mr W Al-Jundi 01603 287063

Mr P W Stather 01603 647289

For further information and support:**Vascular Surgical Society of Great Britain and Ireland**

Tel: 020 74309235

Web address: www.vascularsociety.org.uk

Circulation Foundation

Tel: 020 7304 4779

Web address: www.circulationfoundation.org.uk

For help giving up smoking:

For stop smoking services across Norfolk – including Great Yarmouth and Gorleston Norfolk on 0800 0854 113 or email ecch.stopsmoking@nhs.net

For Suffolk contact One Life Suffolk (including Lowestoft)

Quit 51 on 0800 622 6968.

NHS 111 service**Royal College of Radiologists**

Tel: 020 7636 4432

Web address: www.rcr.ac.uk

Society of Interventional Radiology (SIR).

Web address: www.sirweb.org

