

Angioplasty and stenting

Vascular Surgery

Patient Information Leaflet

Introduction

When an artery becomes narrowed or blocked, the circulation of blood to the muscle it is supplying becomes reduced. This can cause symptoms such as muscle pain, and tissue damage to the affected regions that are deprived of blood and oxygen.

The following information will help explain the process of angioplasty and stenting. Your surgeon will recommend whether they think you should have angioplasty or stenting. This information sheet provides general information but if there is anything you do not understand or want to know more about, your surgeon will happily discuss this with you.

Why do I need this procedure?

The vascular surgeon who is looking after you has assessed your symptoms and investigations. They have recommended that angioplasty or stenting is the most appropriate treatment option for the narrowing of your artery.

Angioplasty or stenting is a procedure used to treat the narrowing or blockage of an artery. It uses either a balloon to stretch the artery (angioplasty) or a metal stent to hold the artery open. These procedures improve blood flow which helps to relieve any symptoms you are experiencing.

What are the benefits?

- Compared to surgical procedures such as bypass surgery, balloon angioplasty and stent placement are much less invasive and relatively low-risk procedures.
- These procedures are performed using a local anaesthetic. No general anaesthetic is required in the majority of patients.
- No surgical cut is needed – only a small nick in the skin that does not have to be stitched to close it.
- You will be able to return to your normal activities a few days after the procedure.

How successful is angioplasty and stenting?

Angioplasty and stenting is successful in treating the narrowing or blockage of an artery in the vast majority of people in the short term (90 to 95 out of every 100 people). In the long term, this number will be slightly lower. In the small number of people where the procedure is unsuccessful, a surgical bypass operation may be offered as an alternative.

What are the risks?

There are potential complications associated with every procedure and it is important that we make you aware of these. The overall risk of the procedure is extremely low. The potential risks can be divided into the following categories:

At the puncture site:

- Some bruising is common after an artery puncture.
- Very rarely, significant bleeding from the artery or blockage of the artery can occur which may require a small operation. The risk of requiring an operation is less than one out of every 100 people.

Related to the contrast (X-ray dye):

- Some people experience an allergic reaction to the X-ray contrast dye used during the procedure. In most cases, this is minor but very rarely; a reaction may be severe and require urgent treatment with medicines. This happens to about one out of every 3,000 people.
- In some people, the X-ray contrast dye can affect kidney function. If you are likely to be at risk of this, special precautions will be taken to reduce the chances of this problem occurring.
- If you have diabetes and you are taking metformin tablets, you should not take them on the day of the procedure and for 48 hours after the procedure. We will tell you what to do about this before you come in for your procedure.

Related to the treatment:

- Blood vessel blockage can occur after angioplasty of a narrowed artery. It can sometimes be treated with a stent.
- A tear in a blood vessel after an angioplasty occurs infrequently. This can sometimes be treated in the X-ray department by putting a stent with a covering around it (stent-graft) into the artery to seal the tear. If this is not possible, you may need an operation to repair the artery.
- Small fragments from the lining of the artery can occasionally break off and lodge in an artery below the angioplasty site. This may also require an operation to 'fish out' the fragment if it is causing a problem with blood flow.

The overall risk of requiring an operation is low. About one to two people out of every 100 will need one.

Other complications

If the artery in the elbow is used, the tube will pass one or more of the arteries supplying the brain. There is a very small risk that a blood clot could form and cause a stroke. About one to two people out of every 100 may get one.

What are the alternatives?

Your consultant has assessed your symptoms and investigations and has advised that angioplasty or stenting is the most appropriate treatment option for you. However, it is your choice as to whether you have this procedure. Surgery may not be offered, depending on your symptoms, as this holds a higher risk of complications.

Do I need to come to hospital for the procedure?

Yes. We will send you an appointment for a week before the procedure for the pre-assessment clinic. At this appointment, nurses will assess you to check that you are fit enough to have the procedure and take some blood for routine tests. This will also give you the opportunity to ask any further questions you may have.

The procedure itself is usually performed as a day case. This means you will only need to be in hospital for the day.

What does the procedure involve?

The procedure is performed in the vascular X-ray department by a radiologist (X-ray doctor).

Local anaesthetic is used to numb the skin and a small tube is placed in the artery in the groin. In some cases, it may not be possible to use the groin artery and an alternative artery in the elbow is used.

A series of pictures are then taken of the arteries by injecting X-ray dye (contrast) into the tube. The contrast will give you a warm feeling each time it is injected and may give you the feeling of wanting to pass water. Do not be alarmed, this is normal.

Under X-ray guidance, the radiologist will:

- Pass a fine wire and tube through the narrowing or blockage in the artery.
- Pass a special tube with a balloon on the end of it across the narrowing or blockage.
- Stretch the artery by inflating the balloon.

The balloon is then deflated and removed from the artery. Further pictures are taken to check if the angioplasty has been successful. The angioplasty may need to be repeated.

If the angioplasty fails to improve the blood flow, a metal scaffold (stent) can be placed in the artery. Once the stent is in place, it cannot be removed and will eventually become covered by the lining of the artery.

How long does the procedure take?

The procedure generally takes about 45 to 60 minutes to perform.

What happens after the procedure?

At the end of the procedure, the radiologist will remove the tube from your groin or elbow. The doctor or nurse will press over the entry site in the groin or elbow for 10 minutes until the artery stops bleeding.

Once the bleeding has stopped, you will need to remain flat in bed for six hours and then be allowed to sit up. A nurse will take you back to the ward after the procedure. It is important for you to lie relatively still during this time to prevent the artery from bleeding again. Sitting up will put pressure on the groin and may cause it to bleed.

In some cases, the radiologist will place a special 'plug' over the hole in the artery at the end of the procedure to stop the bleeding. If this is the case, that particular artery should not be used for any procedures for three months.

After six hours of bed rest, you will be able to get out of bed. The nurses will check whether you have any bleeding from the puncture site. Normally, you will be able to go home the same evening if you have a responsible adult with you at home.

Sometimes, you will need to stay in hospital overnight if a longer period of bed rest is needed.

What happens when I get home?

Once at home, you will need to rest for a couple of days and avoid heavy lifting, for example, shopping bags or the vacuum cleaner. After that, you will be able to return to normal activity and we will actively encourage you to walk on a daily basis.

If you notice bleeding from the puncture site, apply pressure immediately. If you are concerned about the amount of bleeding, call an ambulance.

What follow-up appointments will I have?

We will send you an outpatient appointment to see the vascular surgeon six weeks after the procedure to check your progress.

Is there anything I can do to help?

You cannot do anything to relieve the actual narrowing or blockage.

However, you can improve your general health by taking regular exercise, stopping smoking and reducing the fat in your diet. If you would like help with stopping smoking, please contact a member of the Let's Get Healthy Dudley Team on 01384 732402.

These actions will help slow down the hardening of the arteries which caused the problem in the first place, and may avoid the need for further treatment in the future.

Can I find out more?

You can find out more from the following weblinks:

British Heart Foundation

www.bhf.org.uk/

Circulation Foundation

www.circulationfoundation.org.uk

The Vascular Society

www.vascularsociety.org.uk

Contact information

If you have any questions, or if there is anything you do not understand about this leaflet, please contact your consultant or vascular nurse on the telephone numbers below:

Russells Hall Hospital, Dudley

Mrs Shiralkar	Consultant vascular surgeon	01384 244246
Mr Pathak	Consultant vascular surgeon	01384 244245
Mr Rehman	Consultant vascular surgeon	01384 244176
Mr Newman	Consultant vascular surgeon	01384 244243
Mr Wall	Consultant vascular surgeon	01384 456111 ext. 1235
Sharron Trough/Vicky Baker/Leanne Barker	Vascular nurse specialists	01384 456111 ext. 2456 (answer machine)

New Cross Hospital, Wolverhampton

Mr Garnham	Consultant vascular surgeon	01902 695977
Mr Hobbs	Consultant vascular surgeon	01902 695971
Paula Poulton/Paulette Asbury-Millwood	Vascular nurse specialists	01902 695984

Manor Hospital, Walsall

Mr Khan	Consultant vascular surgeon	01922 721172 ext. 6669
Beth Smith	Vascular nurse specialist	01902 721172 ext. 7648

Russells Hall Hospital switchboard number: 01384 456111

This leaflet can be downloaded or printed from:

<http://dgft.nhs.uk/services-and-wards/vascular-service/>

If you have any feedback on this patient information leaflet, please email dgft.patient.information@nhs.net

This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.

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