

This leaflet tells you about having thrombolysis. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such discussions. If you have any questions about the procedure please ask the doctor who has referred or the department which is going to perform it.

What is thrombolysis?

Thrombolysis is the breakdown of blood clots with the use of drugs. Once a clot starts to form in a blood vessel, it may continue and block the whole vessel. While an operation may be necessary to remove the clot, it is also possible to dissolve the clot by directly injecting a special 'clot-busting' drug into the artery or vein. This can lead to a great improvement in blood flow and may avoid the need for an operation. Sometimes an underlying narrowing is revealed in the blood vessel once the clot has dissolved and it may be possible to treat this by angioplasty (balloon) or stent insertion at the same time.

Why do you need thrombolysis?

Your doctors know that there is a blockage in a blood vessel based on the tests you have already had. These tests might include a Doppler ultrasound scan, magnetic resonance imaging (MRI) or computed tomography (CT) angiography. If nothing is done about the situation, then severe and permanent damage may occur. While the blockage could need treatment with surgery, in your case, it has been decided that thrombolysis is the best way of proceeding.

Are there any risks?

Thrombolysis is generally a safe procedure, but as with any medical procedure there are some risks and complications that can arise. Bruising at the puncture site is very common and rarely may require a small operation. Occasionally, ongoing leakage from the puncture site may cause a swelling called a 'false aneurysm' that may require a further procedure.

Clot-busting drugs have to be very powerful to work, consequently there is a risk that bleeding will occur elsewhere in your body. Commonly, this is from the bowel and might require treatment or stopping the thrombolysis. Very rarely, bleeding can occur in the brain and cause a stroke.

Sometimes the blood clot may be so extensive that the clot-busting drug simply cannot dissolve it all away. In these cases, surgery may be required to relieve the blockage.

If angioplasty or venoplasty is required then there are additional risks related to these procedures (see the relevant patient information leaflets).

Who has made the decision?

The consultant in charge of your care and the interventional radiologist performing the procedure have discussed your case and feel that this is the best option. However, you will also have the opportunity for your opinion to be considered and if, after discussion with your doctors, you no longer want the procedure, you can decide against it.

Are you required to make any special preparations?

Thrombolysis is usually carried out as a day case procedure under local anaesthetic. You may be asked not to eat for four hours before the procedure, although you may still drink clear fluids such as water.

If you have any allergies or have previously had a reaction to the dye (contrast agent), you *must* tell the radiology staff before you have the test.

Who will you see?

A specially trained team led by an interventional radiologist within the radiology department. Interventional radiologists have special expertise in reading the images and using imaging to guide catheters and wires to aid diagnosis and treatment.

Where will the procedure take place?

In the angiography suite or theatre; this is usually located within the radiology department. This is similar to an operating theatre into which specialised X-ray equipment has been installed.

What happens during thrombolysis?

Before the procedure, the interventional radiologist will explain the procedure and ask you to sign a consent form. Please feel free to ask any questions that you may have and, remember that even at this stage, you can decide against going ahead with the procedure if you so wish.

You will be asked to get undressed and put on a hospital gown. A small cannula (thin tube) will be placed into a vein in your arm.

You will lie on the X-ray table, generally flat on your back. A needle will be inserted into a vein in your arm, so that the radiologist or nurse can give you sedation or painkillers if appropriate, but it is normal to remain awake during the procedure. Your pulse, blood pressure, ECG, and blood oxygen levels will be monitored throughout the procedure and you may be given oxygen.

The procedure is performed under sterile conditions and the interventional radiologist and radiology nurse will wear sterile gowns and gloves to carry out the procedure. The skin near the point of insertion, usually the groin, will be swabbed with antiseptic and you will be covered with sterile drapes. The skin and deeper tissues over the artery or vein will be numbed with local anaesthetic, and a fine plastic tube (catheter) is then passed over a wire and into the artery or vein.

The radiologist will use the X-ray equipment and small amounts of dye (contrast agent) to make sure that the catheter is moved into the right position, very close or actually into the blood clot. The clot-busting drug (thrombolytic) is injected down the catheter and into the blood clot. The catheter is left in the artery or vein and attached to an infusion pump, so that injection of the clot-busting drug can be continued over hours (occasionally up to 48–72 hours) during which time you will be transferred back to the ward for careful observation. The radiologist will check progress periodically by injecting the dye to show how much of the clot has dissolved.

Once the procedure is completed, the

catheter will be removed, and firm pressure applied, for about ten minutes, to prevent any bleeding.

Will it hurt?

When the local anaesthetic is injected, it will sting for a short while, but this soon wears off. You may feel a warm sensation for a few seconds when the dye is injected and feel like you are passing urine.

How long will it take?

Every patient is different, and it is not always easy to predict; however, expect to be in the radiology department for at least an hour initially. You may require several trips to the X-ray department to check on progress and sometimes an underlying narrowing is revealed once the clot has cleared which may be treated at the time by angioplasty or stent.

Finally

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure.

Contact:

British Society of Interventional Radiology www.bsir.org

This leaflet has been prepared by the British Society of Interventional Radiology (BSIR) and the Clinical Radiology Patients' Liaison Group (CRPLG) of The Royal College of Radiologists. Approved by the Board of the Faculty of Clinical Radiology: 25 February 2011

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**British Society of Interventional
Radiology**

Thrombolysis

Patient information

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The Royal College of Radiologists