Thrombolysis for vascular conditions

The aim of this leaflet is to help answer some of the questions you may have about having thrombolysis. It explains what is involved and the potential risks of the procedure. If you have any further questions or concerns, please do not hesitate to speak to a doctor or nurse caring for you.

What is thrombolysis?
Thrombolysis means breaking up blood clots. Once a clot starts to form in a blood vessel, it may carry on getting bigger until the whole vessel is blocked. While an operation may be necessary to remove the clot, it is sometimes possible to dissolve the clot by injecting a thrombolytic (‘clot-busting’) drug into the artery, directly into the clot. This can lead to a great improvement in blood flow, and make an operation unnecessary.

Why do I need thrombolysis?
Your doctors know that there is a problem with part of your circulation. You are likely to have had an angiogram, a special x-ray examination of the blood vessels, which has shown a blockage in an artery. If nothing is done about the situation, then severe and permanent damage may result. While the blockage could need to be treated with surgery, in your case it has been decided that thrombolysis is the best way of proceeding.

Consent - asking for your consent
We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves.

If you would like more information about our consent process, please speak to a member of staff caring for you.

What happens during thrombolysis?
The procedure starts off in exactly the same way as an angiogram, and if you have already had this performed you will know what to expect. The procedure is performed by the radiologist and is done under local anaesthetic, which is medication that ‘freezes’ a small specific area of your body so it is pain free but does not put you to sleep.

The radiologist will use x-ray equipment and small amounts of contrast medium (dye) to position a catheter (thin tube) close to the blockage in your artery. This catheter is passed to the blockage in your artery through an incision in your groin. The thrombolytic drug is then injected down the catheter and into the blood clot. The radiologist will check the clot’s progress by injecting contrast dye to show how much of it has dissolved.

In some people all the clot is dissolved at the first attempt. More commonly however, the catheter will need to be left in the artery and attached to an infusion pump, so that the thrombolytic drug can continue to be administered over the next few hours or overnight.
Will it hurt?
Some discomfort may be felt in the skin and deeper tissues during injection of the local anaesthetic. After this, the procedure should not be painful. The radiologist and other staff looking after you can give you additional painkillers if necessary. You will be awake during the procedure, and able to tell the radiologist if you feel any pain or become uncomfortable in any other way. As the contrast medium passes around your body you may get a warm feeling, which some people can find a little unpleasant.

What happens afterwards?
You will be taken back to the ward where the nurses will carry out routine observations, such as taking your blood pressure and pulse, to make sure that there are no adverse effects. They will also look at the puncture site to make sure there is no bleeding. You need to stay in bed for as long as the catheter is in the artery. The radiologist will need to check the progress of the clot and will arrange for you to go back to the x-ray department later in the day or the next day. By injecting a small amount of contrast dye down the catheter, it is possible to tell how much of the clot has dissolved. The radiologist may also use a special balloon attached to a different catheter, to try and open up a narrowed artery and improve blood flow even more. Your radiologist will tell you how long you need to stay in hospital – it may be for a few days.

What happens next?
This depends on where the blockage was and how successful the thrombolysis has been. For many people, no further procedure is necessary. However in some people the artery may be so narrowed that an operation is still required to permanently improve the blood supply.

Following thrombolysis, most people will be started on aspirin or an anticoagulant (a medicine to thin the blood) to improve blood flow in the arteries and to reduce the chance of a similar condition occurring again. When you go home you should continue with all your usual medications. If you are taking metformin, this should be stopped for 48 hours after your procedure and then continued as usual.

What are the risks?

Bruising
There may occasionally be a small bruise around the site where the needle has been inserted and this is quite normal. If this becomes a large bruise, then there is a risk of it getting infected, and this may require treatment with antibiotics or surgery.

Internal bleeding
The most common side effect of thrombolytic drugs is bleeding (haemorrhage). This is most commonly seen at the site of the injection but may also occur elsewhere in the body. Generally the risk of a minor haemorrhage (a bleed that does not require any surgery or blood transfusion) is 15% (it will happen in around 15 out of every 100 people having the treatment). The risk of a major bleed requiring surgery or a blood transfusion is 5% (5 out of every 100 people). The risk of the treatment causing a stroke is around 1% (1 in 100 people). However, the risks of not treating your blocked artery are felt to be greater than the risks of bleeding elsewhere.

The treatment may not work
Sometimes the blood clot may be so large that the thrombolytic drug simply cannot dissolve it all. In these cases, surgery will be required to relieve the blockage.
**Allergic reactions**
Some patients have an allergic reaction to the thrombolytic drug. Please tell your nurse or doctor if you have had a previous allergic reaction.

Some patients have an allergic reaction to the contrast dye used to obtain the x-ray pictures. This reaction is usually minor, for example a skin rash which will clear up on its own. On rare occasions it can be a more serious allergy to the dye, which can be treated with steroids. Please tell your nurse or doctor if you have had a previous allergic reaction.

**Kidneys**
The iodine in the contrast dye can affect the kidneys, particularly if there is already some kidney damage. Intravenous fluids and medication can be given before and after the procedure to try to reduce this risk. A routine pre-procedure blood test will always be done to assess your renal function (whether your kidneys are working properly).

**Haematoma**
Bleeding or bruising can occur under the skin (where the catheter is inserted in the groin). This is known as a haematoma and is very common, and can take one or two weeks to disappear.

**Tear in the artery**
Occasionally the artery can be damaged during the procedure. This can sometimes be treated in the same department by putting a stent with a covering around it (a stent-graft) into the artery to seal the tear. If this is not possible an operation may be required to repair the artery. The risk of needing this operation is less than 1% (less than 1 in 100 people).

Around 1 in 10 people will need to have a further smaller operation in the future, if a leak is detected around the stent at your follow-up appointment.

**Infection**
The most common complications are groin wound infections, which in most cases can be managed by a course of oral antibiotics.

**Other complications**
General complications of this type of surgery include a heart attack and chest infection, but these are very rare.

**What can I do to help myself?**

**Smoking**
If you are a smoker the single most important thing you can do to help yourself is to give up smoking. Stopping smoking will also help to protect all of your arteries, making it less likely that you will suffer from heart attacks or strokes. Giving up is not easy but there is a smoking cessation service and support groups that can help. Your vascular specialist nurse or GP practice nurse can advise you about these. If you would like to give up smoking, please speak to your nurse or call the Trust stop smoking service on **020 7188 0995**, or call the NHS Smoking Helpline on **0300 123 1044**.

**Activity**
Gentle exercise such as walking and cycling are recommended to help improve your overall fitness. Exercise helps your body to produce healthy cholesterol and this helps to protect your arteries against bad cholesterol.
Blood pressure
It is very important that you have your blood pressure checked regularly, at least every six months. If you have been prescribed medications for high blood pressure, you must make sure that you take it according to the instructions given.

Diabetes
If you have diabetes it is important that your blood sugar levels are well-controlled.

Blood cholesterol (fatty substance in your blood) levels
You should eat a healthy, balanced diet and try to reduce any excess weight. It is important to reduce the level of cholesterol in your blood. Your vascular nurse can refer you to a dietician if needed. You may be prescribed medication to help lower your cholesterol (for instance a statin), and low dose aspirin to help prevent blood clots from forming.

Contact us
If you have any questions or concerns before or after you have left hospital, please contact the vascular specialist nurses, t: 07825 503 902 (Monday to Friday, 8am–4pm).

You can also contact Luke Ward, t: 020 7188 3566 or Sarah Swift Ward, t: 020 7188 8842 (24 hours) and speak to the ward sister or nurse in charge.

The above contacts can put you in touch with a vascular consultant if needed.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline
If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.
t: 020 7188 8748 9am to 5pm, Monday to Friday

Your comments and concerns
For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.
t: 020 7188 8801 (PALS)  e: pals@gstt.nhs.uk
t: 020 7188 3514 (complaints)  e: complaints2@gstt.nhs.uk

Language and accessible support services
If you need an interpreter or information about your care in a different language or format, please get in touch.
t: 020 7188 8815  e: languagesupport@gstt.nhs.uk

NHS 111
Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.
t: 111

NHS website
Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.
w: www.nhs.uk