

## PATIENT INFORMATION

# FISTULOGRAM, FISTULOPLASTY AND VENOPLASTY



This leaflet tells you about having a fistulogram, fistuloplasty or venoplasty. 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 you or the department which is going to perform it.

### WHAT IS A FISTULOGRAM?

This is an examination of the blood vessels that make up your fistula. A small needle is placed in your fistula and dye (contrast agent) is injected. This dye provides an image (like a map) of the blood vessels that would otherwise be invisible on X-ray. The interventional radiologist interprets the images.

### WHAT IS A FISTULOPLASTY OR VENOPLASTY OR STENT?

Occasionally, the blood vessels that make up a fistula can develop a narrowing which is diagnosed with a fistulogram. A special balloon called an angioplasty balloon is introduced into the area of narrowing inside the fistula. This balloon is inflated from outside the body momentarily and then deflated to improve the narrowing. A completion fistulogram is then carried out to check the result. If this is in the fistula it is called a fistuloplasty, if it is in a central vein it is called a venoplasty. Very rarely, a special metal tube called a stent is inserted into the fistula. This is permanent and keeps the narrowing open. Stents are generally only used if the balloon does not improve the narrowing satisfactorily or if there is a complication.

### WHY DO YOU NEED A FISTULOGRAM?

Your doctor feels that there may be a problem with your dialysis fistula (or graft). This test is the best way to diagnose the problem associated with your fistula. You may already have had a Doppler ultrasound scan to assess the flow in your fistula to help decide how to approach this problem.

### WHAT ARE THE RISKS OF A FISTULOGRAM?

Fistulograms are very safe procedures but there are some risks and complications that can occur. Very occasionally, a small bruise can appear at the site of needle puncture. Less commonly, ongoing bleeding in this area leads to a short inpatient stay (once or twice in every hundred). Very rarely damage to the fistula can occur that may require further treatment by the interventional radiologist or a small operation. The risk of infection is very low.

### WHAT ARE THE RISKS OF A FISTULOPLASTY/VENOPLASTY?

Fistuloplasty/venoplasty, like a fistulogram, is very safe but occasionally complications do arise. A fistulogram is often performed before a fistuloplasty. There is a small risk of failure of treatment. Sometimes the narrowing in a fistula does not respond well to the fistuloplasty/venoplasty and requires a stent. The risk of bleeding is slightly higher than for fistulogram (about three-in-100 chance). There is a small risk that the treatment may damage or even rupture the fistula/vein. If this were to happen, the fistula may fail and could not be used for dialysis. A small operation may be required at the time but more likely a line would be placed and a new fistula fashioned. When considering this risk, it is important to bear in mind that leaving a narrowing in a fistula or vein, without treatment it is likely your fistula would ultimately fail.

### WHO HAS MADE THE DECISION?

Your doctors, the vascular access nurse and the interventional radiologist will have discussed your care and feel this is the most appropriate next step. 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?

Fistulograms are performed as an outpatient. However, if you may require a fistuloplasty or venoplasty, you may be admitted as a day case and asked not to eat or drink for four hours before the procedure.

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 A FISTULOGRAM, FISTULOPLASTY OR VENOPLASTY?

You will be asked to get undressed and put on a hospital gown. A small needle may be placed in your non-fistula arm in case you need an injection of a painkiller or light sedative.

You will be asked to lie flat on your back. The skin over the area of your fistula will be swabbed with an antiseptic and you will be covered with sterile drapes. Local anaesthetic will be injected into the skin. A needle, often followed by a fine plastic tube, will then be placed in the fistula and dye injected. You will be asked to hold your breath for a few seconds while the images are taken. If you have a fistuloplasty or venoplasty, you will have monitoring devices placed on your chest and on your finger and if a sedative is given, you will be given oxygen via a face mask. Occasionally, it may be necessary to place a fine plastic tube in the vein in your groin as all the veins inside your body are connected and treatment is sometimes carried out via the groin vein, as this may be a safer option than directly through the fistula.

## WILL IT HURT?

The local anaesthetic will sting initially, but this soon passes. Occasionally when the balloon is inflated during fistuloplasty, a dull ache may occur but this passes when the balloon is deflated.

## 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 around 15–20 minutes for a fistulogram and fistuloplasty or venoplasty can take up to an hour.

## WHAT HAPPENS AFTERWARDS?

Light pressure is applied for a few minutes to the region where the needle/plastic tube was placed to prevent bleeding. You can usually go home 30 minutes after a fistulogram, but will need to stay in hospital for a few hours following fistuloplasty or venoplasty. A follow-up fistulogram will usually be required after one month. You will receive this appointment in the post.

## 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](http://www.bsir.org)

## LEGAL NOTICE

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 2020

© The British Society of Interventional Radiology (BSIR) 2020. Permission is granted to modify and/or re-produce these leaflets for purposes relating to the improvement of health care provided that the source is acknowledged and that none of the material is used for commercial gain. If modified, the BSIR and RCR logos should not be reproduced. The material may not be used for any other purpose without prior consent from the Society.

Please remember that these leaflets are intended as general information only. They are not definitive, and the RCR and the BSIR cannot accept any legal liability arising from their use. We aim to make the information as up to date and accurate as possible, but please be warned that it is always subject to change. Patients should therefore always check specific advice on the procedures or any concerns they may have with their doctor.