

## Renal Medicine – Creation of Arteriovenous Fistula

### Introduction

The Covid pandemic has had a significant impact on the NHS ability to provide routine elective services. We recognise that patients are waiting longer than we would all like and it is not always possible to identify when treatment will take place. This document provides you with information on how you are able to support yourself while waiting to attend the hospital. The guidance has been written by clinicians who are responsible for your care.

An arteriovenous fistula is formed during an operation. The surgeon joins a vein and an artery together in your arm. This forms a more accessible blood vessel that gives the increased flows of blood that are required for haemodialysis.

An arteriovenous graft is similar to a fistula but instead of the artery being connected directly to your vein, a plastic tube is used to link the two together.

Your Renal Consultant or Renal Nurse Specialists (RNS) will refer you for fistula/graft formation.

Ideally, if a fistula is needed, this should be planned at least 6 months before starting dialysis. A fistula will take 6-8 weeks, sometimes longer, before it is ready to be used for dialysis.

Please read the following information in conjunction with the staying healthy guidance appropriate for your condition.

### Guidance for Patients

If you need a graft, it is still best to prepare in advance, a graft will be needed if you are unable to have a fistula. A graft can be used much sooner than a fistula.

It is not always possible to plan for the fistula or graft especially if you need dialysis suddenly, therefore a plastic tube known as a vascular catheter will be inserted into your neck or groin to allow you to have dialysis until the fistula or graft is created and is ready to be used.

If you do have a vascular catheter in place for dialysis, once the fistula or graft is being used successfully for 2 weeks the vascular catheter can be removed. Your dialysis staff will refer you to have this removed on the Renal Day Case Unit.

Once you have been referred for a fistula or graft you will be invited to see one of the vascular access surgeons at clinic, who will discuss your options with you.

You may have already been to radiology to have your veins and arteries of your arms scanned, the surgeon will use this to advise you on your options.

In the clinic, we will talk to you about the surgery and explain the advantages and possible complications. Please ask any questions that you have. We will also talk to you about any medication that you might need to stop taking before your surgery.

You will need to have MRSA swabs taken. MRSA is a germ that lives on the skin or in the throat. It does not normally cause infection but can do after an operation. If your swabs are positive for MRSA you will be given a special

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shampoo and body wash to use to get rid of it before the operation. The swabs are valid for 12 weeks if you are already on dialysis and 18 weeks if you have not started dialysis yet. Please ask your nurse in clinic for more information regarding this.

Once you have been assessed by the surgeon you will be added to the theatre waiting list and will be sent a date for your procedure.

If your procedure is on a Monday and you are already receiving dialysis you may be asked to dialyse on the Sunday in preparation for your procedure on Monday.

If you are on dialysis and the theatre date is on your dialysis day, the dialysis staff will move your dialysis sessions to accommodate.

You will be asked to come to UHCW at 7.30am on the morning of the procedure. If your procedure is in the afternoon you may be asked to come in for 11am. Instructions about where to come will be sent to you once a theatre slot has been booked.

Most procedures are performed under local anaesthetic so you will be awake and you will be able to eat and drink as normal.

If you need a general anaesthetic (where you are asleep) you will need to attend a pre anaesthetic review to make sure it is safe to give you a general anaesthetic before you are given a date for your procedure. If you are having a general anaesthetic you will need to stop eating and drinking before your operation and will be given advice about this.

After your fistula or graft operation you will return to the Renal Day Case Unit or Ward 50.

The nurses on the day unit or ward will check that your fistula or graft is working properly.

This is done by feeling the site where the fistula has been formed. A buzzing sensation known as the “thrill” can be felt. The nurse will also listen for a “bruit” around the site, which is a whooshing sound heard through a stethoscope. The “thrill” and “bruit” are caused by the high flow of blood through the vein or graft and are a good indication that the fistula or graft is working.

If you have a fistula, and all is well, you will go home the same day, usually in the evening.

Patients who have a graft will stay overnight after their surgery.

Can there be any complications after the operation?

- Most people experience some pain after the operation. Pain relief can be taken to help ease this.
- You may notice a small amount of blood visible on the dressing or some bruising around the wound site. This is normal.
- You may feel or be sick (nausea and vomiting) if you had a general anaesthetic.
- The fistula or graft can become blocked by a blood clot and stop working. If this happens immediately after the operation the surgeon may want to try and unblock the fistula. This will be discussed with you at the time.
- There is a small risk of an infection in the skin where the surgeon has made the cut. This may require treatment such as antibiotics.
- Swelling in the fistula arm. It is important to move the arm as much as possible after surgery. This movement may help to reduce swelling and stop the arm from becoming stiff.

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- There can also be back pressure on the blood vessel, causing a swollen arm, or reduction in the blood flow to the lower arm, causing cold fingers. The risk of either of these occurring is very small but the risks are higher if:
  1. You have thin blood vessels in your arm,
  2. You have had previous operations for fistula formation and
  3. You have diabetes; it may help to wear a glove on the hand to keep it warm.

## What should I do if my health is deteriorating?

If you are already on haemodialysis, your dialysis nurses will check the fistula/graft to ensure it is working at each haemodialysis session.

If you are not yet receiving haemodialysis your Renal Nurse Specialist will check the fistula/graft at one or two weeks to check for healing and to ensure fistula/graft is working and at six weeks to check for fistula /graft development.

If you are a transplant or CAPD patient and your Consultant has requested the formation of a fistula/graft, your transplant /CAPD nurse will check and monitor your fistula/graft after this has been created.

However, you should contact us (details below) if you experience any of the following symptoms:

- The fistula/graft becomes red, swollen, or painful.
- The appearance of the fistula/graft changes, for example: a lump appears over the wound.
- you experience a tingling sensation in your hand or fingers.
- You can no longer feel a “thrill” or “buzzing” sensation.

## Contact Us

Access Nurses on 02476 96 8307 Monday to Friday 8am-4pm

Ward 50 at UHCW on 02476 96 8257 or 02476 28258