



# Planning for your arteriovenous fistula

Information for patients from the Kent Kidney Care Dialysis Access Team

This leaflet will explain what an arteriovenous fistula is, how it is created, and how it is used.

## What is an arteriovenous fistula?

- An artery and a vein are joined together under the skin by surgery, to create a stronger vein.
- An arteriovenous fistula can also be known as an AV fistula, a fistula, or AVF for short.

## Why am I having a fistula created?

You are having a fistula created to make your vein stronger, to allow adequate access to your blood for haemodialysis; this is the best access for long-term haemodialysis. Compared to central venous catheters (lines), fistulas have reduced risks of infection and complications.

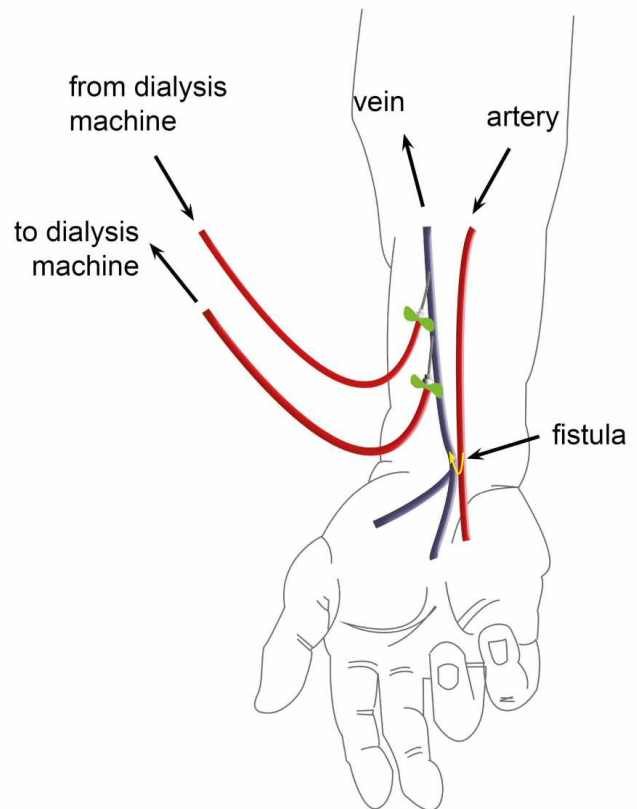
## How is a fistula created?

- A fistula is created in a surgical procedure performed by a vascular surgeon in an operating theatre. By joining a vein and an artery together the new connection (fistula) will become a strong vein with a larger flow of blood.
- The pressure of blood is greater inside an artery than inside a vein. So when your surgeon creates the fistula between your artery and vein, some of the arterial pressure is transferred into your vein.

This increased flow of blood through the vein causes it to enlarge, making it suitable for haemodialysis needles to be inserted.

## How is a fistula used for dialysis?

The fistula is used for haemodialysis by placing two needles at different places along the fistula. The needles have special tubing attachments, the blood will flow through the first needle out of your body, through the dialysis machine to clean your blood and back through the second needle into your body.



How the fistula is used for dialysis

### How will I be assessed to plan a fistula?

- You will be given a clinic appointment to see a vascular surgeon and an access nurse at either the Renal Outpatients at Kent and Canterbury Hospital, Outpatients at Queen Elizabeth the Queen Mother (QEQM) Hospital, the Renal Unit at Maidstone Hospital, or the Renal Unit at the William Harvey Hospital.
- Usually, you will have an ultrasound scan of both arms before you see the surgeon.
- Once the surgeon has identified which arm is best to have the fistula, we advise that you do not have any of the following procedures on that arm.
- Do not use your \_\_\_\_\_ arm for injections, infusions, and blood tests. In future this arm will be used for dialysis only.
- A date for your surgery will be agreed with you.

### Will the operation hurt?

- Most fistula procedures are done under local anaesthetic, which means you will be awake for the procedure. You may feel some discomfort for a few days afterwards; we will advise you about pain relief.
- Your surgeon will advise and explain if a general anaesthetic is needed for surgery (you will be asleep for the procedure).

## How long will I stay in hospital?

- Please refer to your surgery appointment letter.
- Most fistulas are completed as a day case (you go home after your procedure).
- Allow four to five hours for the whole visit. The procedure normally takes about an hour. If you are well enough, and have had a **local anaesthetic** you will be able to go home several hours after your surgery. If you have had a **general anaesthetic or block anaesthetic** (where your whole arm is made numb for several hours) you may have to stay in hospital overnight.

## What will happen when I arrive at hospital?

- Please go to either Marlowe Ward or Kent Ward. You will be seen by the access nurse and surgeon, who will fully explain your procedure and ask you to sign a consent form. Use this time to ask any final questions. Remember you have the right to withdraw your consent for treatment at any time.
- You will be asked to put on a theatre gown for this procedure. You may want to bring a dressing gown with you to hospital.
- Your appointment letter will tell you:
  - if you can eat and drink before your operation.
  - if any medication changes are needed, including what to do if you take warfarin tablets.
  - if you need to bring an overnight bag in case of an overnight stay.
- You may want to bring something to read and a snack for after your surgery.

## What will happen after my operation?

- Before you go home the access nurse or renal nurse will see you. You will be advised and given a leaflet on the care of your fistula and shown how to check it is working.
- A follow-up appointment will be given to you. Please ask if you have any questions.
- We advise that you do not drive for at least three days after your surgery.

## What are the possible complications?

- **Infection** is not common in a fistula. If you develop pain, redness, or the skin around your fistula becomes hot, please tell a nurse or doctor. You may need antibiotics if you have an infection.
- **Thrombosis** (a blood clot) is a common reason for fistulas to fail. If this happens, it is not serious and your doctor or nurse will advise you further.
- **Arterial steal syndrome** is caused by the fistula diverting too much blood into the vein, meaning the hand does not get enough blood supply. The signs and symptoms of steal syndrome are coldness in the hand / fingers. In mild cases this will be monitored, in more severe cases your fistula may need to be refashioned surgically.

- **Bleeding** from a fistula is not common. We will advise you what to do if your fistula bleeds after your surgery.

If you have any concerns, please call your Dialysis Unit if you are on dialysis, or contact the renal access nurses using the contact details at the end of this leaflet.

### When is a fistula ready to use?

- How quickly a fistula develops varies. It depends on how good your blood vessels were before your surgery and your general health.
- We will give you a soft ball to squeeze, which will help improve the blood flow through your fistula.
- A fistula is ready (or mature) when the vein has grown large enough and strong enough to support the dialysis needles. This usually takes around six to eight weeks, but can vary between patients. Your dialysis nurse will check your fistula and will know when it is mature.

### How long will my fistula last?

- There is no definite answer to this question. A small number of fistulae never work and you may return from theatre with a failed fistula. Fistulae can also fail at any stage, even after years of use if you become ill or suffer an episode of low blood pressure. Other reasons for failure can be direct trauma (a hit or knock) to your fistula, infection, or if something changes how your blood clots.
- Most fistulae work immediately following surgery. You should remember that a successful fistula is less likely to form clots or become infected than other types of access. Also, fistulae tend to last years longer than any other kind of access.
- You will be given advice on how to care for your fistula after your surgery.

### Contact details

Please feel free to ring us at any time for further information.

- Renal Dialysis Access Nurses, Kent and Canterbury Hospital, Canterbury  
Telephone: 01227 864305 (Monday to Friday, 8:30am to 4:30pm)
- Marlowe Ward, Kent and Canterbury Hospital, Canterbury  
Telephone: 01227 783100
- Thomas Becket Haemodialysis Unit, Kent and Canterbury Hospital, Canterbury  
Telephone: 01227 783047
- Haemodialysis Unit, William Harvey Hospital, Ashford  
Telephone: 01233 651872
- Haemodialysis Unit, Queen Elizabeth the Queen Mother (QEQM) Hospital, Margate  
Telephone: 01843 225544
- Haemodialysis Unit, Medway Maritime Hospital, Medway  
Telephone: 01634 825105

- Haemodialysis Unit, Buckland Hospital, Dover  
Telephone: 01304 222695
- Haemodialysis Unit, Maidstone Hospital, Maidstone  
Telephone: 01622 225901

**This leaflet has been produced with and for patients.**

**Please let us know:**

- If you have any accessibility needs; this includes needing a hearing loop or wanting someone to come with you to your appointment.
- If you need an interpreter.
- If you need this information in another format (such as Braille, audio, large print or Easy Read).

**You can let us know this by:**

- Visiting the Trust web site (<https://www.ekhft.nhs.uk/ais>).
- Calling the number at the top of your appointment letter.
- Adding this information to the Patient Portal (<https://pp.ekhft.nhs.uk/login>).
- Telling a member of staff at your next appointment.

**Any complaints, comments, concerns or compliments**, please speak to a member of your healthcare team. Or contact the Patient Advice and Liaison Service on 01227 783145 or email ([ekh-tr.pals@nhs.net](mailto:ekh-tr.pals@nhs.net)).

**Patients should not bring large sums of money or valuables into hospital.** Please note that East Kent Hospitals accepts no responsibility for the loss or damage to personal property, unless the property has been handed into Trust staff for safe-keeping.

**Further patient information leaflets** are available via the East Kent Hospitals' web site (<https://www.ekhft.nhs.uk/patient-information>).

Reference number: Web 312

First published:  
July 2016

Last reviewed:  
August 2022

Next review date:  
December 2025



Illustrations and Photographs created by the Medical Photography Department.

Copyright © East Kent Hospitals University NHS Foundation Trust.