

# Making a fistula for haemodialysis

Renal Unit

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

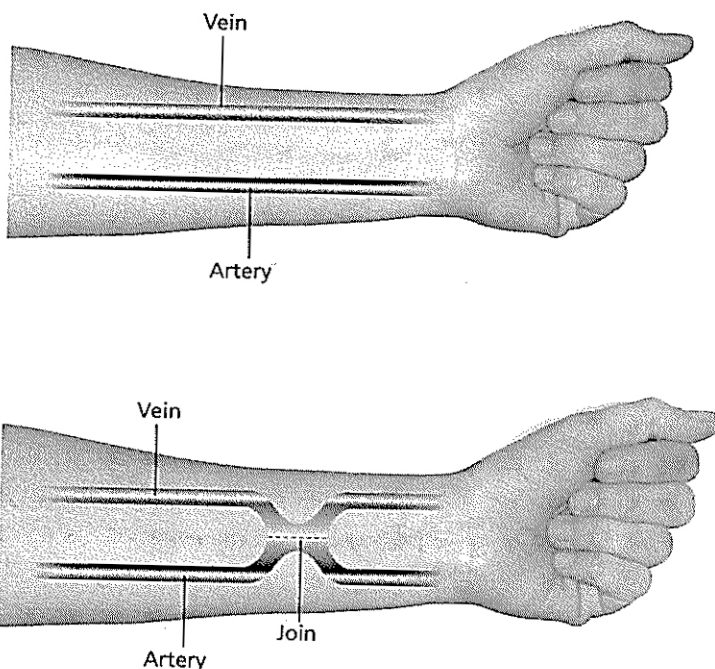
- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

# Introduction

This leaflet tells you about the operation to make a fistula for haemodialysis treatment. Please read it carefully as well as discussing this with your surgeon, nurse, or doctor.

## What is a fistula?

A fistula is made in the wrist or elbow by a small operation. A surgeon creates an arterio-venous (AV) fistula by connecting an artery directly to a vein. Connecting the artery to the vein causes more blood flow into the vein. As a result, the vein grows larger and stronger, making repeated needle insertions for haemodialysis treatments easier. Two needles can then be inserted into the vein each time you come for dialysis. The needles will be removed at the end of each dialysis.



When possible the fistula is created in your non-dominant arm (the one you do not use for writing).

For haemodialysis treatment to work, taking blood from you and returning it to you after it has been 'cleaned' by the kidney machine is needed; this is known as your vascular access.

The AV fistula is considered the best long-term vascular access for haemodialysis because it provides good blood flow for dialysis, lasts a long time and has a complication rate lower than the other access types. If an AV fistula cannot be created, an AV graft or venous catheter may be needed.

## Why would you need to have a fistula made?

A fistula operation is done because haemodialysis treatment is going to be needed for a few months or years. Once the fistula vein has become large enough (usually 8 - 12 weeks after the operation) you can be connected to the dialysis machine by putting a needle into this big vein instead of using a dialysis line.

## Are any investigations needed before the fistula can be created?

If the surgeon is worried that your veins are too small or may have been damaged in the past you may need to go for a venogram which is a scan where dye is injected into a hand vein and the path of the dye is then followed up the arm to the heart using X-rays. This will identify any problems with the veins and also which is the best one to use.

You must not allow anyone (including hospital doctors) to put needles or drips in your arms anywhere between your wrist and your elbow, this is because these veins need to be used to create a fistula if possible and putting needles and drips into them can damage them so they are no longer suitable for fistula formation.

## Consent

We must seek your consent for any procedure or treatment beforehand. Your doctor will explain the risks, benefits and alternatives where relevant before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed please do not hesitate to ask for more information.

## What are the benefits of having a fistula operation?

Once the vein has grown in size it can be used to connect you to the dialysis machine and you will be less likely to develop problems such as infection or clotting than if you have a dialysis line.

## What are the risks of a fistula operation?

With any medical procedure there is a risk of complications and it is important you know what these are. Fistula operations have a small risk of complications and additional risks associated with a general anaesthetic.

- There is a small risk of bleeding after the operation and it is important that you tell the staff beforehand if you have a problem with easy bleeding or if you are taking tablets that affect bleeding such as Warfarin. You should also tell the staff if you are allergic to Iodine
- After the fistula operation there is a small risk that the wound could become infected and this can usually be prevented by keeping the area as clean as possible
- The fistula may reduce the amount of blood going to your hand and occasionally this makes the hand feel colder than usual or causes pins and needles or some weakness. Additionally the artery or nerve could be damaged during the operation which can also cause changes in sensation you may experience in your hand
- Sometimes the fistula stops working after the operation because of clotting in the vein and you may be given tablets to thin the blood such as Aspirin to try to prevent this happening
- You might also experience some congestion or swelling in the veins in your hand or of the hand itself
- There is also the potential that the fistula may not work. If you are going to have this operation it is important that you agree that these risks are worth taking

## What are the alternatives to having a Fistula operation?

It is possible to use a dialysis line in the long term to be connected to the dialysis machine but this is more likely to cause complications such as infection and clotting. It is also possible to have more complicated fistula operations where the artery and vein are joined under the skin by another piece of vein or artificial material or where the blood vessels in the thigh are used to make the fistula. This is referred to as an AV graft. These are more likely to have complications than a fistula at the wrist or the elbow. Dialysis lines and more complicated fistula operations are usually recommended when a simple Fistula cannot be made.

If you agree to have a fistula operation you will be asked to sign a consent form which will also state that you have received information about the procedure and have discussed it with your surgeon, nurse, or doctor.

If you have any questions please contact the Nurses that usually look after you on the Renal Unit, Renal Nurse Consultant or Vascular Access Sister.

## What is shared decision making?

The choice about which treatment is best for you will be made together with your doctor. This will be based on the risks and benefits of the treatment and your individual circumstances.

## Pre-operative assessment

You should receive a letter from the pre-op. service advising you of arrangements before your operation date. You may be asked to avoid eating or drinking for six hours before the operation depending on the type of anaesthetic planned. If you are diabetic you will be given specific advice on what to do before your surgery.

A few days before your operation you might be asked to attend the hospital for a pre-operative assessment where you will have some bloods taken and you may be assessed by a doctor to make sure that you are well enough for your surgery.

## Where is the operation done?

The operation is usually done in an operating theatre and takes about an hour. Sometimes the operation is done with a local anaesthetic (so you will remain awake) and sometimes a general anaesthetic is needed (so you will be asleep).

## How is it done?

The skin over the wrist or elbow will be cleaned with antiseptic once you have had the general anaesthetic or before the local anaesthetic is injected. A two to four inch cut is made into the skin and once the artery and vein have been found they are sewn together and lastly the skin is sewn back together again.

## What happens afterwards?

After the anaesthetic has worn off you may feel some pain where the skin was cut and you may need to take a mild painkiller. A dressing may be applied to protect the fistula for a few days and you will be told if and when any stitches and the dressing are to be removed. If you are already on haemodialysis (HD) your dressings will be changed and stitches removed via your HD unit. If you are not yet on HD this care will be arranged by the Chronic Kidney Disease (CKD) team.

After the fistula operation there may be slight swelling of the arm for a few days. You should avoid bumping your arm and if you develop severe pain, bleeding or discharge from the wound you should seek medical help. You will be given advice after your surgery on how to care for your fistula and who to contact in the event of emergencies such as bleeding or infection. You will also be given a leaflet and card to keep to remind you of this advice.

## Are you able to go home straight away, after the procedure?

You should avoid having blood pressure measurements, blood samples taken or wearing tight clothes in the fistula arm and you will be taught how to check that the fistula is working. Patients who have a fistula can usually feel it “buzzing” slightly. This is a good sign; it means that it is working well. If it stops buzzing, you should let your Renal Unit know as this may be an indication that the blood has clotted.

Some fistulas require a second operation to bring the developed vein closer to the surface so that the nurses are able to insert the needle into it.

## Going home advice

If you have any concerns please call the telephone numbers below for advice.

## Contact Numbers

|                                                             |                                    |
|-------------------------------------------------------------|------------------------------------|
| <b>The Haemodialysis Unit:</b>                              | 01902 694010                       |
| <b>The Home Therapies Unit:</b>                             | 01902 695011                       |
| <b>The Chronic Kidney Disease Team:</b>                     | 01902 695446                       |
| <b>Renal Consultant Nurse /<br/>Vascular Access Sister:</b> | 01902 307999<br>ext. 86136 / 82829 |

## Other Information Sources

[www.kidneypatientguide.org.uk](http://www.kidneypatientguide.org.uk)

[www.renalpatients.co.uk](http://www.renalpatients.co.uk)

[www.kidney.org](http://www.kidney.org)

[www.kidneyresearchuk.org](http://www.kidneyresearchuk.org)

## English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

## Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

## Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

## Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

## Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

## Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。