



Planning for your arteriovenous graft and care of your graft after surgery

Information for patients from the Renal Dialysis Access Team

This leaflet will explain what an arteriovenous graft is, and how it is inserted and used.

Why am I having a graft inserted?

You are having a graft inserted to allow adequate access to your blood for haemodialysis. Grafts are used when a person's blood vessels are too small and fragile to be used for a fistula. Grafts have a reduced infection and complication risk compared with a tunnelled dialysis line.

What is an arteriovenous graft?

- A piece of material is surgically joined to an artery and a vein under the skin. This is usually in the upper arm but may be in the upper thigh.
- An arteriovenous graft can also be known as an AV graft, or graft, or AVG for short.

How will I be assessed to plan a graft?

- You will be given a clinic appointment to see a vascular surgeon and access nurse in Renal Outpatients at Kent and Canterbury Hospital (K&C), Palm Bay Outpatients at the Queen Elizabeth the Queen Mother (QEQM) Hospital, the Renal Unit at William Harvey Hospital, or the Maidstone Renal Unit Clinic. 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 graft, you should not have any procedures on that arm.
- Do not use your _____ arm for blood pressure, injections, or infusions. In future this arm will be used for dialysis only, except for blood tests, which can still be taken from the back of either hand.
- A date for your surgery will be agreed with you.

How is a graft inserted?

A graft is inserted in a surgical procedure by a vascular surgeon in an operating theatre.

Will the operation hurt?

- Most graft procedures are done under general anaesthetic (you are asleep for the procedure) or by an anaesthetic that makes the full arm numb.
- You may feel some discomfort for a few days after your procedure. You will be told about pain relief before you leave hospital.

How long will I have to stay in hospital?

Please refer to your appointment letter for what time to arrive at hospital. Sometimes graft surgery is completed as a day case. Allow six to eight hours for your visit.

The procedure normally takes about an hour. If you are well enough, you will be able to go home several hours after your surgery. If you have had a general anaesthetic you will probably stay overnight in hospital.

What will happen when I arrive at hospital?

- When you arrive at hospital go to either Marlowe Ward or Kent Ward at Kent and Canterbury Hospital. You will be seen by the access nurse and surgeon who will fully explain your procedure; they will ask you to sign a consent form. Use this time to ask any final questions. Remember you can withdraw your consent for treatment at any time.
- Before having your operation you will need to put on a theatre gown; you may want to bring a dressing gown with you.
- Your appointment letter will tell you if you need to fast (not eat or drink) before your operation and if you can take your normal medication. It will also tell you if you need to bring an overnight bag, in case you have to stay in hospital overnight.
- You may want to bring to hospital 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 speak to you. You will be told how to care for your graft at home and shown how to check it is working. You will be given a follow-up appointment. Please ask if you have any questions.

When can I drive again?

You should not drive for several days after your surgery.

What should I do if my graft bleeds?

- If your graft bleeds lightly after you get home, sit down and apply pressure with clean gauze for 10 minutes. If the bleeding does not stop after this time, please contact your Renal Unit or Marlowe Ward for advice.
- **Heavy bleeding is rare, but it is a medical emergency.**
 - **If this happens, call 999 immediately.**
 - **Apply direct pressure to the area that is bleeding using gauze and several fingers (do not use a large towel, as this spreads out the pressure).**
 - **Elevate (raise) your arm above your head.**

How long will my wound take to heal?

- Your wound will take 10 to 14 days to heal.
- We advise you to keep your dressing dry for at least three days before you change it. You will be given spare dressings to take home.
- Keep your wound covered for seven days, when you will be seen at your one week check-up.
- Avoid any heavy lifting / pressure with your graft arm for two weeks.
- Do not keep your graft arm bent for long periods of time.
- We will tell you if stitches / clips need to be removed; sometimes the sutures are dissolvable.

When can I go back to work?

Please ask your nurse or doctor for advice, as this will depend on the type of work you do.

How can I check my graft is working?

Remember your graft is your lifeline for dialysis. You must know how to look after it when you are at home.

- **Thrill** is a vibrational feeling when you place your fingers on the skin over your graft.
- **Bruit** is the “shoosh-shoosh” noise your graft makes when you listen through a stethoscope.
- **Twice a day** - this is how often you should check your graft.

What happens if my hands / fingers start swelling?

Sometimes hands or fingers may swell after your operation; this is normal. It can be relieved by elevating (raising) your arm on several pillows when resting, and avoiding wearing rings, elasticated sleeves, or wristbands. If the swelling continues or you are worried your graft is not working, please call us for advice (our contact details are at the end of this leaflet).

How do I look after my graft at home?

You play an important part in keeping your graft healthy.

- Do not take blood pressure measurements from your graft arm.
- Do not have any blood tests taken from your graft arm.
- No needles or infusions to go in your graft arm.
- Do not wear any tight or restrictive clothing on your graft arm.
- Avoid sleeping on your graft arm.
- Do not use sharp objects near your graft arm, such as razors.
- Avoid carrying heavy loads or shopping bags directly over your graft arm.
- Do not remove the scabs from the needle sites, as this may cause bleeding or an infection.

Please note in an emergency these guidelines may not apply. You should be guided by the medical staff in attendance.

What complications may occur?

- **Infection** is not common in a graft. If you develop pain, redness, or the skin around your graft becomes hot, please tell your access nurse, dialysis nurse, or doctor. You may need an antibiotic if you have an infection.
- **Thrombosis** (blood clot) can be a cause of graft failure, but this type of clot is not life threatening.
- **Arterial Steal Syndrome** is caused by the graft diverting too much blood in to the vein, so your hand then receives less 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 graft may need to be refashioned surgically.

If you are worried about any of the above, please call us for advice (our contact details are at the end of this leaflet).

When will my graft be ready to use?

Some grafts can be used the day after surgery, while others can be used two weeks after insertion. We will provide a soft ball for you to squeeze which will help improve the blood flow through the graft.

How is a graft used for dialysis?

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

You will not be able to use the buttonhole needling technique with a graft.

How long will my graft last?

There is no definite answer to this question. Grafts can fail at any stage, if you become ill or suffer an episode of low blood pressure. Other reasons can be direct trauma (knock or hit) to your graft, infection, or if a change in how your blood clots.

However the majority of grafts work immediately following surgery. You should remember that a successful graft has a higher risk of infection and clotting than a fistula but lower risk than a tunnelled dialysis line. You may expect your graft to last on average two to three years; you may need procedures in the future to keep the graft patent.

Where can I find out more?

- Renal Dialysis Access Nurses, K&C Hospital, Canterbury
Telephone: 01227 864305 (Monday to Friday, 8am to 4:30pm)
- Marlowe Ward, K&C Hospital, Canterbury
Telephone: 01227 783100 (Out of hours or weekends)
- 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.ekhuft.nhs.uk/ais>).
- Calling the number at the top of your appointment letter.
- Adding this information to the Patient Portal (<https://pp.ekhuft.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).

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.ekhuft.nhs.uk/patient-information>).

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