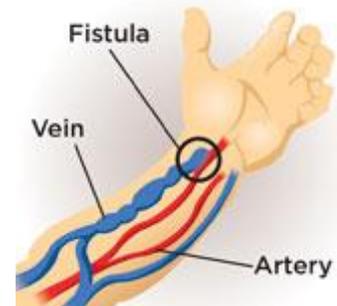


Arteriovenous Fistula or Graft

Hemodialysis is filtration of the blood by a machine. It does the work of the kidney. For hemodialysis, we need to make a way to move your child's blood to the machine and back. This can be done in two different ways:

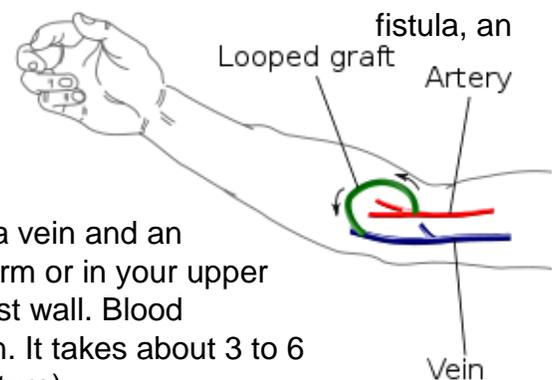
What is an arteriovenous fistula?

An arteriovenous fistula is a large blood vessel that has a fast flow of blood. It is used to put needles into the body for hemodialysis. Minor surgery is done to connect a vein to an artery. Your wrist or elbow is the best place for a fistula. It should last for many years. It normally takes 3 to 4 months for it to be ready (mature) so it can be used for dialysis.



What is an arteriovenous graft?

If your blood vessels are too small or fragile for a fistula, an arteriovenous looped graft can be used to put needles into the body for hemodialysis.



Minor surgery is done to sew an artificial tube between a vein and an artery. Most often it is done in the inside bend of your arm or in your upper arm. Sometimes, grafts may be placed in the leg or chest wall. Blood flows quickly through the graft from the artery to the vein. It takes about 3 to 6 weeks after surgery before the graft is ready to use (mature).

How do I care for the fistula or graft?

Check every day for signs of infection:

- Redness
- Swelling
- Warmth
- Drainage of pus
- Fever or chills
- Pain or tenderness

Be sure to feel for the thrill or buzz 2 or 3 times every day.

If the fistula or graft starts to bleed, put firm pressure over it with a clean gauze pad until it stops. **Do not** press so hard that the blood flow through your fistula or graft stops. You should still be able to feel the thrill or buzz while you are holding pressure.



If you notice sudden swelling around your fistula or graft, hold firm pressure over the needle stick sites until the swelling stops. You should still be able to feel the thrill or buzz while you are holding pressure.

If you have a loop graft, make sure you know which side is for medicine (venous) and which side is your arterial side. If you have a straight graft, make sure you know which is the arterial end (normally the bottom end).

The dialysis nurse will rotate your needle stick sites each time you come for your treatments.

Extra care is needed to protect the fistula or graft. Be very careful.

Do not:

- let blood pressures be done on that arm.
- let anyone other than dialysis staff do needle sticks in that arm.
- wear tight sleeves, jewelry or watches on that arm.
- carry heavy objects on that arm.
- sleep on that arm.

What will help the fistula mature

Your doctor or nurse will talk to you about what exercises to do and when to start. Often, you will start exercises about one week after surgery. If there were any problems with the surgery, it might be longer.

Exercises should be done 3 to 4 times a day on days when you do not have hemodialysis. You should do the exercises until your fistula has good blood flow. Your dialysis nurse will tell you when you can stop doing them. Follows these steps:

1. Check your fistula for signs of infection and for the thrill or buzz. If you find any problems, do **not** exercise and call your doctor.
2. Put a **light** tourniquet 4 or 5 inches above the elbow of the arm. You should still be able to feel the thrill or buzz. Put a warm, wet washcloth on the fistula during the exercise.
3. With a **light** tourniquet and washcloth on the fistula, squeeze a rubber ball or rolled-up washcloth for 10 to 15 minutes. Alternate squeezing and relaxing your hand.

ALERT: Call your child's doctor, nurse, or clinic if you have any questions or concerns or if your child has special health care needs that were not covered by this information.

Call your doctor or dialysis unit **immediately** if:

- You cannot feel the thrill or buzz.
- Bleeding or sudden swelling does not stop after holding direct pressure for 30 minutes.
- You have any of the signs of infection listed above.

This teaching sheet is meant to help you care for your child. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment, and follow-up