Fistula for Hemodialysis

What is a fistula?

A fistula is the joining of an artery and a vein by a surgeon. The fistula is called an access. It is called an access because it is used to “get to” or “access” the blood in your body in order to filter or clean it.

This procedure is done with local anaesthetic. This means that either your whole arm or just the area where the fistula is made is frozen so you do not hurt during the operation. With time the vein becomes bigger and stronger.

The flow of blood in an artery is much faster and stronger than the flow of blood in a vein. When the artery and vein are joined, blood from the artery causes the vein to stretch and become larger and stronger.

How is a fistula used?

Dialysis treatments remove waste, extra salt and water from your blood. During hemodialysis, 2 needles are put into the fistula. They are called the arterial needle and the venous needle.

Each needle is attached to tubing. The arterial tube takes your blood to the kidney machine where it is filtered. The venous tube then brings the blood back to your body.

The next page shows a picture. Your arm or machine may not look the same as this.
How do I care for my fistula?

Members of the health care team will help you learn how to care for your fistula. Here are some general guidelines to follow.

**Swelling**

To reduce swelling, keep your arm above the level of your waist. Raise your arm on a pillow when you are sitting. **Do not keep your arm hanging at your side.**

**Dressing**

A light dressing covers your arm until the clips or stitches are removed. If your surgeon uses stitches that dissolve on their own they do not get removed. You may have a little bleeding and swelling around the incision. This is normal.

If the dressing gets dirty or comes off, cover the area with clean gauze. **Do not put tape all the way around your wrist or arm.** You should buy a package of gauze and paper tape to keep at home. Your incision and dressing will be checked the next time you see your surgeon, vascular access nurse or dialysis nurse. If you have any concerns call your nephrologist, vascular access nurse or the dialysis unit.
Fistula

Bleeding

If you see blood soaking through the dressing, apply firm, constant pressure on the area with clean gauze. Raise your arm above your heart while you apply pressure. Do this for a full 5 minutes to stop the bleeding.

If the bleeding does not stop or gets worse, go to the nearest Emergency Department right away. Keep firm pressure on the area and keep your arm above your heart until you get help.

Will I have pain and discomfort?

You may have some pain or discomfort. You can take plain Tylenol or one tablet of extra strength Tylenol every four hours to help. You can buy Tylenol at the drug store without a prescription. If you are allergic to Tylenol, talk to your doctor.

You should have less pain each day. If your arm does not feel better each day, call your surgeon.

When do the stitches come out?

Your surgeon or dialysis nurse will remove your stitches 7 to 10 days after surgery. If you have stitches that dissolve, you do not have these removed.

What activities can I do?

You may move your arm and bend your elbow when you need to. Do not use your fistula arm to lift heavy things.

When your incision heals, you can go back to your normal activities such as having a shower, bathing in a tub or swimming.

When you first have a fistula, you may feel cautious and anxious. Over time, you will feel more comfortable with your fistula. You will be more relaxed and be able to do your usual activities without thinking about your fistula.
Protect your fistula

You may need a fistula guard to do some activities safely. A guard is a piece of plastic that fits over your fistula to protect it. Your doctor can make an appointment with an occupational therapist for you. The occupational therapist will fit you with a fistula guard.

Develop your fistula

After the stitches are removed or dissolved and the incision has healed, you need to exercise your fistula several times a day. Exercise helps your fistula get bigger and stronger. Hemodialysis is easier with a well-developed fistula.

It takes up to 8 to 12 weeks for a fistula to become strong and ready to use. You will have an appointment with the surgeon or vascular access nurse to check the size and development of your fistula in 4 to 6 weeks.

To exercise the fistula, you need:

- 2 washcloths rolled into a tube shape and taped or
- a soft sponge ball – ask the vascular access nurse for a ball

Follow the steps and pictures on the next page to exercise your fistula ➔
Follow these steps

1. Hold the roll or ball lightly at your side.

2. Apply pressure to your fistula arm below the armpit with your other hand. At the same time, squeeze the roll or ball 5 times.

3. Let go of your arm and rest your hand and arm.

4. Repeat this exercise 5 times. This is called 1 set.

Do 1 set of exercises 3 to 5 times each day.

You can exercise your fistula while you read, walk, watch TV or take a break at work or school.
What problems can I have with my fistula?

There are 3 problems you should watch for:

- infection
- clotting
- bleeding

Infection

It is important to watch for signs of infection:

- the skin around the fistula is red, warm or hot to touch
- your arm is swollen, tender or painful to touch
- you have a fever or chills
- you see drainage around the incision

If you have any of these signs, call your doctor right away.

Prevent infection

- Clean your arm well before each dialysis treatment. Use a sponge with an antiseptic in it. Scrub your arm for 3 minutes at the sink in the Dialysis Unit. The nurse cleans this area again with an antiseptic swab when the needles are put in.
- **Do not scratch the skin on your fistula arm.** Let your nurse know if your skin is itchy. Scratching may cause your skin to break and become infected. Your doctor can order medication or cream to help itching.

Check your fistula for clotting

There are 2 ways to check for good blood flow in your fistula:

- You can listen for a sound called a bruit near the fistula.
  You pronounce the word bruit like brew-ee.
- You can feel for a thrill at the fistula site.
  A thrill feels like buzzing under your skin.

The bruit and thrill tell you that your fistula is working. Check your fistula every day. Your doctor or nurse will show you how to listen and feel for these. If you do not hear the bruit or feel a thrill, call your doctor right away. It may mean that the blood has clotted inside your fistula and is blocking blood flow.
Prevent clotting

Here are some helpful hints to prevent blood clotting:

- Protect your fistula arm from bumping.
- Do not carry heavy objects using your fistula arm.
- Do not wear tight things such as a watch or bracelet on your fistula arm.
- Do not sleep with your fistula arm under your body.

Do not let anyone:
- Take blood from your fistula arm
- Start an intravenous in your fistula arm
- Take your blood pressure on your fistula arm

Check for bleeding after dialysis

When the nurse takes the needles out, he or she will apply pressure to the needle sites on your skin for a full 5 to 10 minutes. This will stop the bleeding.

A dressing is then taped over the sites. You may take the gauze off in 6 to 8 hours.

If a needle site starts bleeding after dialysis, apply finger pressure over the dressing. Hold your arm above your heart at the same time. Do this for a full 5 to 10 minutes.

If the bleeding does not stop or gets worse, go to the nearest Emergency Department right away.

Tell your dialysis nurse on your next visit if you had bleeding after dialysis.

Working together . . .

It is important for your fistula to last as long as it can. When you work closely with your nurses, your fistula can last for years. Each time you come for dialysis treatments make sure the nurse puts the needles in a different spot. Moving the needle sites ¼ inch or 5 mm along your arm will let your blood vessels heal and help your fistula last.

Where can I get help?

If you have any questions or concerns contact your nephrologist, vascular access nurse or the Dialysis Unit.
Medical Alert Identification

It is a good idea to wear medical alert identification. You can get an application from your pharmacy. Talk to your vascular access nurse about what to have written on the medical alert identification.