Some facts about the AV fistula

Introduction
In order to have regular hemodialysis treatments, nurses need to have access to your bloodstream. To form this access, a surgical or other specialized procedure will be needed.

The three most common types of access are:
- Internal arterio-venous fistula (AV fistula)
- Internal arterio-venous graft (AV graft)
- Central venous catheter (also called central venous “line” or hemodialysis catheter)

The AV fistula
Worldwide, the AV fistula is the preferred type of access to your bloodstream for hemodialysis treatments.
An AV Fistula is made by a surgeon by connecting together an artery and a vein in your arm. Because of the higher than normal blood flow through the AV fistula, the vein will become stronger and thicker, which will allow the AV fistula to have hemodialysis needles inserted for your treatments.
Upon the advice of your surgeon and/or nephrology team, you may be asked to do some exercises to help the AV fistula to “mature” or thicken up and become stronger.
Benefits of an AV fistula

- An AV fistula uses your own arteries and veins without the need for artificial material.
- Because there is no artificial material with an AV fistula, there is a lower risk of infections (compared to AV grafts or central venous catheters).
- An AV fistula has the best chance of lasting longer (compared to AV grafts or central venous catheters).
- Once the surgical site has healed, there are no restrictions on swimming or showering.

Surgery to create an AV fistula

A surgical procedure is needed to create an AV fistula. Usually this can be done under local anesthetic (freezing), but your surgeon will discuss this with you. The procedure typically takes between 30 and 60 minutes and you are able to go home the same day.

Once the surgery is done, the AV fistula must “mature” before it can be used. This usually takes between four and six weeks.

When the AV fistula is mature and ready for use, each time you have a hemodialysis treatment the dialysis nurse will insert two needles into your fistula.

Care of your AV fistula

The surgeon and/or nephrology team will give you instructions about the care of the dressing and when it can be removed.

Once the incision has healed (about two weeks after surgery), exercise the AV fistula arm as directed by the surgeon and/or nephrology team and follow any other directions they give you.

On an on-going basis, you should do the following:

- Check for a “thrill” which is the sensation like a vibration caused by blood flowing through your fistula and can be felt just above your incision line. The “thrill” indicates the AV fistula is working.
- Check your hand on the side of the AV fistula for any changes in colour, temperature, sensation (tingling or numbness) or the development of pain and/or swelling, or any bleeding from your fistula. **Notify your surgeon and/or your nephrology team if any of these things occur.**

At each hemodialysis treatment

- Follow any advice given to you by the dialysis staff.
- Your nephrology team will meet with you to discuss options about how the needles can be placed. This may be individualized to your specific needs.
- At the end of each treatment, the needles are removed. Apply light pressure for 10 minutes (or as instructed by your nephrology team) using the fingers from your other hand at each needle site to promote clotting at the site.
- If bleeding starts again once you leave your dialysis unit, apply light pressure for 20 minutes and if bleeding does not stop, go to your nearest emergency department. **Remember to report this problem to your nephrology team as well.**
**Important reminder**

- Do not allow anyone to take blood, place an intravenous or check your blood pressure on the arm with the AV fistula.

For further information, or if you wish to help us in our efforts, please contact The Kidney Foundation of Canada office in your area. You can also visit our Web site at [www.kidney.ca](http://www.kidney.ca).

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