Internal Fistula

In order for you to have dialysis treatments, a procedure must be done to allow easy access to your blood stream. A fistula is a connection of an artery and a vein inside your arm. The purpose of a fistula is to increase the blood flow in the veins in your arm. Arteries carry blood with oxygen to your organs, muscles and skin. Veins carry the blood without oxygen back to your lungs and heart.

A surgeon will form a fistula inside your arm by cutting a small slit into the artery and in a nearby vein. The artery and the vein are sewn together where the two openings meet. Blood from the artery flows through the hole into the vein helping the vein to enlarge. Your vein can then be used for the large needles needed for dialysis.

Care of Your Fistula

Injury
An injury to your fistula can cause heavy bleeding because of the increased blood flow. Avoid injury to this arm. If an injury occurs, put a clean bandage over the injured area and apply pressure to stop the bleeding. If you can not stop the bleeding, call 911.
**Exercise**
The arm with the fistula needs special care. The blood vessels are small when the fistula is new. Frequent exercise is important to develop the vessels, especially for people with small blood vessels. Exercise by squeezing a rubber ball, tennis ball, spring grips or silly putty for 10 to 20 minutes, several times a day to build muscles in your forearm. Knitting and crocheting also are good exercises for your arm.

Exercised muscles push more blood through your fistula. If exercise is not enough to increase the size of your veins, the nurses may want you to soak your arm in warm water before, during and after you exercise. The vessels will gradually enlarge because of the increased flow of blood. It may take 6 to 8 weeks or longer for your fistula to mature and be used for dialysis.

**Precautions**
Any narrowing of the blood vessels can decrease the blood flow in your fistula and can cause clotting. Dialysis staff will also put the needles in different places in your fistula to avoid damaging the fistula.

**To protect your arm with the fistula:**
- Avoid taking blood pressure, having IVs or drawing blood from the arm with a fistula.
- Wear loose fitting clothing and clothing with elastic openings.
- Do not sit, lie or sleep in a position that restricts the fistula.
- If you wear watches or jewelry on the arm with the fistula, make sure it is loose on the arm.
- Check the “thrill” by placing your hand next to the incision to feel the blood rushing through the fistula 3 or 4 times daily. If you do not feel a pulse, call your doctor or the Dialysis Unit.

**Incision Care**
After the first 24 hours, leave the incision uncovered. A light dressing can be applied if you have drainage or if your clothing irritates the incision. Allow the tapes (steri-strips) to fall off by themselves in 7 to 10 days. If needed, gently wash the incision with mild soap and water. Gently pat the skin dry. Do not rub the area.

A small amount of swelling and redness can be expected. Any swelling will improve if you prop your arm on 1 or 2 pillows and keep your elbow straight, but relaxed.
When to Call Your Doctor

Call your doctor right away if you have:

- Signs of infection:
  - Severe pain, especially in the hand of the arm that has the fistula
  - A temperature greater than 100.5 degrees F or 38 degrees C.
  - Redness
  - Swelling
  - Draining
  - Warm to touch
  - Numbness in hand
- Changes in thrill or pulse
- Color changes or severe weakness in the hand of the arm that has the fistula
- Severe bleeding – apply pressure, seek emergency treatment or call 911

Talk to your doctor or others on your health care team if you have questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.