Inpatient Dialysis Unit

Overview
Northwestern Memorial Hospital’s Dialysis Unit offers a full range of inpatient services that include:

- Hemodialysis.
- Peritoneal dialysis.

Quality patient care is provided by a team of trained and dedicated professionals, including:

- Nephrologists.
- Nurses.
- Social workers.
- Dietitians.
- Technicians.

The unit is located in the Feinberg Pavilion, Room 9-748. Enter at 251 E. Huron St., and take the elevator to the 9th floor. The Dialysis Unit telephone number is 312-926-1696.

Each patient may have only 1 visitor for 10 minutes each hour. Children are not allowed in the dialysis unit. At times, the charge nurse may ask visitors to step out of the unit. No visitors can be in the unit while patients are being put on or taken off dialysis machines. For your safety, patients and visitors are asked to stay in the family waiting area until called by the nurse.

Kidney Failure

Kidney Function
Inside each kidney there are about 2 million nephrons. The nephrons filter the entire blood supply all day, every day.

The kidneys:

- Cleanse waste from the blood.
- Rid the body of excess fluids.
- Aid in regulating chemicals in the blood.
Help control blood pressure.
- Help maintain healthy bones.
- Aid in red blood cell production.

When the kidneys are not working well, waste products and extra fluid in the body can rise to unsafe levels.

**Causes of Kidney Failure**
The kidneys can be damaged by:
- Prolonged high blood pressure.
- Complications of diabetes or pregnancy.
- Infections.
- Kidney stones.
- Cysts.
- Birth defects.

Toxins such as certain drugs, solvents and insecticides also can damage the kidneys.

**Treatments for Kidney Failure**
Kidney failure can be treated by:
- A kidney transplant.
- Dialysis.

During surgery, a new kidney is transplanted into a patient with kidney failure. Kidneys may come from two sources: a living donor or a deceased person, most often an accident victim. If you are interested in a transplant, talk with your doctor.

Dialysis treatments take over some of the work of the kidneys. Dialysis prevents waste from building up in your body and damaging your health. There are two types of dialysis: **hemodialysis** and **peritoneal** dialysis. Both can be done in hospitals, dialysis centers or at home.

**Hemodialysis**
Hemodialysis uses a machine to filter waste products from the blood. Most often, needles are inserted into either a fistula or graft to remove blood from the body. A fistula is a surgical link between an artery and a vein. In a graft, the artery and vein are linked just below the skin using a small plastic tube. Once the blood is filtered, it is returned to the body. Blood and dialysate, a cleansing solution, are brought together in the dialyzer, or artificial kidney. The blood and dialysate never mix. They are divided by a thin porous membrane or filter. Unwanted water, chemicals and waste products pass through the membrane into the dialysate. The used dialysate is discarded.
The clean dialysate never mixes with the used dialysate. The blood is filtered many times during a treatment until it is “clean.” Treatments are done 2 to 3 times a week; each takes about 3 to 4 hours.

**Peritoneal Dialysis**

In peritoneal dialysis, a thin flexible tube is placed into the abdomen during surgery. Using this tube, sterile fluid, similar to body fluid, is instilled into the abdomen. In turn, the fluid absorbs waste products and excess fluid from the bloodstream. The fluid and waste products are then drained out through the tube. This cycle is repeated. The number of cycles and time the fluid remains in the abdomen varies with each patient.

**Medications**

Dialysis replaces only some of many functions of the kidney. Medications also are needed to maintain your health. Most dialysis patients take the following:

- **Renal multivitamins** are made for people with kidney disease. Other vitamins cannot be used instead. Certain vitamins contain minerals that can cause serious problems.
- **Antihypertensives** are used to control high blood pressure.
- **Phosphate binders** contain calcium and work like a magnet to pull phosphorus out of your food.
- **Antipruritics** help to control itching.

Based on your needs, other medications may be ordered by your doctor. It is important that you know why you are taking certain medications. For each medication you take, you should know:

- Name.
- Dose.
- Route.
- Purpose.
- Side-effects.

Talk to your nurse or doctor before taking any newly prescribed or any over-the-counter medication. Also, be sure to notify them if another doctor prescribes a new medication for you. They will be happy to answer any medication questions you may have.

It is important to avoid:

- **Aspirin** – Do not take aspirin unless directed to do so by your doctor.
- **Cough and Cold Medicines** – Many over-the-counter cough and cold medications are dangerous to people on dialysis. Medications such as Nyquil® and Vicks Formula 44® are high in potassium. High potassium levels can lead to death. Other medications may cause your blood pressure to rise to unsafe levels.
- **Laxatives** – Many laxatives contain magnesium, which is difficult to remove from dialysis patients. A high magnesium level may cause serious problems.

- **Salt Substitutes** – Often very high in potassium. Taking large amounts of potassium is very dangerous and can be fatal.

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**Hemodialysis**

**What Happens During a Dialysis Treatment**

Before and after each dialysis treatment:

- Your blood pressure will be taken while you are sitting or lying down.
- Your pulse will be checked by the dialysis machine.
- Your nurse will take your temperature.
- You are weighed. A sling scale is used if you cannot stand.

This will help your nurse to decide the amount of fluid that needs to be removed and if you are stable enough to begin your treatment.

During treatment, you will be closely monitored. Your blood pressure and pulse will be checked every half hour by the dialysis machine itself. During the treatment, most patients are comfortable and able to do a variety of things to pass the time. Once your treatment is over:

- The needles will be removed.
- You will have your blood pressure, pulse, temperature and weight taken.
- You will be allowed to leave when stable.

**Medications Used During Dialysis**

- **Heparin** keeps the dialyzer and lines free of blood clots. Heparin is short-acting and should not cause any problems after your treatment. **Before each treatment**, tell the nurse if you have:
  - Bruising.
  - Pinpoint red spots.
  - Bleeding when you brush your teeth.
  - Bleeding from your fistula or graft after you leave the unit.
  - Fallen since your last treatment.

These problems may indicate that you need less heparin.

- **Saline** has many treatment uses. The most important use is to keep your blood pressure at a safe level while on dialysis.

- **Erythropoetin** (Epo) is given to treat anemia (low blood count) caused by chronic renal failure. It may be given by injection or through the dialysis machine.
- **Iron supplements** (such as Ferrlecit and Venofer) can be given through the dialysis machine. Iron often is used with Epo to treat anemia. Your doctor will have blood tests drawn to decide if you need this medicine.

- **Calcijex® or Zemplar®** also is given through the dialysis machine. It helps to prevent renal bone disease. This condition affects almost all kidney patients.

**Fistula/Graft**

A fistula is a surgical link between an artery and a vein. Pressure from the artery causes the vein to increase in size. A well-developed fistula is needed for a good dialysis treatment.

A graft is like a fistula. But it uses a tube to link an artery to a vein under the skin. Your fistula or graft is your “life line.” Only the dialysis staff or doctors are allowed to place needles or draw blood from this area.

**Do not allow** anyone to:

- Draw blood from the fistula or graft arm
- Take your blood pressure on your fistula or graft arm
- Do a finger stick for glucose in the fistula or graft arm
- Insert an IV (into the vein) needle in the fistula or graft arm.

The care of the fistula and graft are the same.

**Care of Your Fistula/Graft**

- The “rushing” feeling over your fistula or graft is called the “thrill.” You must check daily for the “thrill.” If you cannot feel it, call the Dialysis Unit right away.

- Wash your fistula or graft with an antibacterial soap daily.

- Avoid anything tight on your fistula or graft arm such as watches, elastic bands, tight clothing.

- Avoid activities that might hurt your arm such as football or basketball.

Call the Dialysis Unit right away if you have any signs of fistula/graft infection: redness, swelling, drainage or warmth.

Before each dialysis treatment, if you are able to stand at a sink:

1. Wash your hands with the antibacterial soap at the unit.

2. Scrub your fistula or graft for 3 minutes with Chloraprep, an antibacterial soap provided by the Dialysis Unit. Allow the Chloraprep to air-dry.
Care of Your Catheter

Special catheters (tubes) may also be used as an access to your blood vessels, most often for a limited time. They can be placed on your neck or chest. In caring for this catheter:

- Avoid getting the catheter wet. The dressing over the catheter should be kept clean and dry to prevent infection. It is best to sponge bathe instead of taking a shower.
- Notify the dialysis staff right away if you have any signs of infection, such as redness, pain, swelling, drainage or foul odor.
- Never change the dressing unless told by the dialysis staff or doctor.
- Never push the catheter in or pull it out yourself.
- Apply pressure to the site if it begins to bleed and go to the Emergency Room.

The staff will give you more detailed guidelines about your type of catheter and how to care for it.

Hospital Resources

Social Worker

The Nephrology social worker helps patients and their families adjust to the changes and stresses that living with chronic renal failure can bring. Your social worker will visit and talk with you about your lifestyle prior to dialysis. Every attempt will be made to help you maintain your independence and lifestyle once you have started dialysis.

The social worker provides emotional support and problem-solving skills to patients and families. Sometimes counseling may be needed for:

- Anxiety and depression.
- Concerns about present and future health.
- Impact of illness on family relationships.
- Lifestyle changes.
- Sexual dysfunction.

Your social worker may also refer you to other services. Community agencies help patients and families solve specific problems:

- Transportation to and from the Dialysis Unit.
- Financial concerns.
- Employment issues.
- Out-of-town treatments.

Ask your nurse to contact the hospital social worker.
Renal Dietitian

With kidney failure, the kinds and amount of food you eat become very important. The dialysis process removes extra fluid and waste products. However, this process cannot remove what a healthy kidney does 24 hours a day. Protein, potassium, sodium, phosphorus and fluid intake must be limited.

The Renal Dietitian will help you adjust your diet to meet your nutrition needs. Your diet is a vital part of your care. It will not cure kidney disease, but will impact how you feel and your long-term health. Poor diet often leads to problems, such as:

- Nausea.
- Vomiting.
- Itching.
- General weakness.

It also causes longer and more difficult dialysis treatments.

Your diet will be tailored to your specific needs. The dietitian will help you to know what and how much you can safely eat. The goal is a nutritious and well-balanced diet.

If you would like to speak to a dietitian, ask your nurse.

Questions

If you have any questions or concerns, please ask any of the Dialysis Unit staff. The unit phone number is 312-926-1696.

For a problem on a non-dialysis day, or at night, please:

1. Follow your doctor’s instructions on calling.

   Your doctor is ________________________________

   The phone number is __________________________

2. Call the Northwestern Memorial Hospital physician’s answering service at 312-695-0596 and ask to speak to the nephrologist on call.

3. Go to the Emergency Room.
Health Information Resources

For more information, visit one of Northwestern Memorial Hospital’s Health Learning Centers. These state-of-the-art health libraries are located on the third floor of the Galter Pavilion and on the first floor of the Prentice Women’s Hospital. Health information professionals are available to help you find the information you need and provide you with personalized support at no charge. You may contact the Health Learning Centers by calling 312-926-LINK (5465) or by sending an e-mail to hlc@nmh.org.

For additional information about Northwestern Memorial Hospital, please visit our Web site at www.nmh.org.

Para asistencia en español, por favor llamar a el departamento de representantes para pacientes al 312-926-3112.

Northwestern Memorial is an equal opportunity employer that welcomes, respects and serves with dignity all people and does not discriminate, including in hiring, or employment, or admission, or access to, or treatment in its programs or activities on the basis of race, color, gender, national origin, religion, disability, handicap, age, Vietnam or other veteran status, sexual orientation or any other status protected by relevant law. To arrange for TDD/TTY, auxiliary aids and foreign language interpretation services, call the Patient Representative department at 312-926-3112, TDD number 312-926-6363. Issues related to the Rehabilitation Act of 1973 should be directed to the director of Employee Relations or designee at 312-926-7297.

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For more information about Northwestern Memorial Hospital, please visit www.nmh.org.

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