Home Therapy Options for Dialysis
About the training
You will work with 1 nurse during your training. We start by showing you and explaining the procedures. You will then practice doing your own dialysis until we feel you are safe. You will not be on your own until your nurse feels you are ready. You will get an information manual to keep. It has written directions for your procedures. At home, it will be a helpful guide.

Supplies
The Home Dialysis Program provides the supplies for home dialysis. There is no cost to you. Supplies for peritoneal dialysis will be delivered to your home every month. A company representative will call you 1 week before the delivery to find out what supplies you need. These supplies are given to everyone doing home dialysis. You will be asked to provide your own heating pad and scissors for peritoneal dialysis. Bring them with you to Point Pleasant Lodge.
Follow-up
When your training is finished, you become a member of our Home Dialysis Program. One of our nephrologists (kidney specialists) will follow your care. You will return to the Unit in about 1 month for a check-up. If your nephrologist feels you are doing well, you will be asked to return for check-ups every 3 months (if you live in Nova Scotia).

Peritoneal dialysis
Peritoneal dialysis is a type of dialysis used to remove excess waste products and fluid. Inside your abdomen, a thin membrane called the peritoneum forms a sac around many of your internal organs.

The peritoneum is a good filter for dialysis because:

• The peritoneum has microscopic “holes” that allow certain small particles (such as waste products) and fluids to pass from one side of the membrane to the other.

• The peritoneum contains millions of tiny blood vessels. These blood vessels carry the waste products and fluids that need to be filtered into contact with a cleansing solution called dialysate. When the peritoneal cavity is filled with the cleansing solution, waste products and excess fluids that have built up in the bloodstream pass through the tiny holes in the membrane and into the solution. The extra wastes and fluids are removed when the peritoneal cavity is drained.
Fresh cleansing solution is then used to restart the process. The draining of the fluid that has been in the peritoneal cavity for a few hours and the filling with fresh fluid is called a “bag exchange”.

- Good personal hygiene, wearing masks, proper hand washing, and equipment checks are all important during peritoneal dialysis.

Peritoneal dialysis: dialysate flows into the abdomen where it absorbs wastes; later, used dialysate is drained.
We offer 2 types of peritoneal dialysis in our unit:

1. **CAPD** (Continuous Ambulatory Peritoneal Dialysis)
   A dialysis procedure (called an exchange) is done 4-6 times each day. During the day, these exchanges are done about every 4-6 hours (for example, 7 a.m., noon, and suppertime). With the last exchange of the day, (at bedtime), the solution stays in the peritoneal cavity overnight (8 hours) while you are sleeping. Each exchange takes about 30-45 minutes. It should be done in a clean, well-lit room with the windows and doors closed. Pets must not be in the room during procedures.

2. **Cycler or CCPD** (Continuous Cycling Peritoneal Dialysis)
   A machine, called a cycler, is used to drain and fill the peritoneal cavity while you sleep. In addition, the cycler can also be used to do 1-2 exchanges during the day. The machine weighs about 25 pounds and is portable. It can be taken with you if you are away from home or travelling.
Advantages of peritoneal dialysis:

Independence
• Many people are able to do their own peritoneal dialysis and may not need a helper.
• Once your catheter exit site is healed, it is OK to swim in salt water (ocean) or in chlorinated pools.

Flexibility
• You can choose the times because you are doing the dialysis.
• It’s easier to travel.
• It can usually be done at your workplace in a closed room.

Diet
• Less restricted than if on hemodialysis but fluids, salt, and phosphorous will be controlled.
• Better fluid control
• These diet benefits are because dialysis is done every day. This will also help you keep any remaining kidney function for longer.

Peritoneal dialysis is easier on your body than hemodialysis.

Training is usually about 5 days.
Disadvantages of peritoneal dialysis:
• Infection
  » Infection in your peritoneal cavity may happen.
  » There is a chance of a skin infection where
    the peritoneal catheter leaves the body.
  » Strict procedures must be followed.
• Restricted lifting
  » Do not lift more than 20-25 pounds.
• You cannot take a tub bath.
• Exchanges have to be done every day.
• There is a permanent catheter in your abdomen.

The peritoneal catheter
The dialysis fluid enters the peritoneal cavity
through a tube called a peritoneal dialysis catheter.
In the Operating Room, a small, soft, flexible tube
will be placed in your abdomen, on 1 side, above or
below your navel (belly button). For some patients,
we are not able to place the peritoneal dialysis
catheter in their abdomen. For these patients, we
would insert a presternal dialysis catheter in the
upper chest wall. Whether you stay in the hospital
or are able to go home the day of your surgery, you
will be assessed on an individual basis.

Caring for the catheter
Special care must be taken to make sure that it
heals well and is free from infection. Home
Care nurses will come to your home and
change the dressing every 7 days.
The incision (cut) must heal for at least 3 weeks before the catheter can be used for CAPD (Continuous Ambulatory Peritoneal Dialysis). Some people need hemodialysis before the catheter is ready to use. They usually are given a short course of hemodialysis (a few weeks). If hemodialysis is needed while you are waiting to train for CAPD, Home Care nurses will continue to do your dressings. A nurse from the Home Dialysis Unit will call you with the date when your peritoneal dialysis training will start.

Hemodialysis at home

The term ‘hemodialysis’ comes from 2 words. ‘Hemo’ means blood, and ‘dialysis’ means cleaning the blood with an artificial kidney instead of with your own kidneys.

There are 3 options for home hemodialysis:

1. Conventional
   This type of hemodialysis is usually done 3-4 times a week. This is usually every other day with one 2 day break if receiving 3 times a week). Each treatment lasts 4-5 hours.

2. Short daily
   This type of hemodialysis is done 6-7 days a week for 2-3 hours each day.

3. Nocturnal
   This type of hemodialysis is done overnight 5-6 nights each week. Each treatment lasts 7-8 hours each night.
The blood flows into the dialyzer (artificial kidney), is cleaned, and returned to the patient. The dialyzer has a space for blood and a space for dialysis fluid. Dialysis fluid is a special fluid which helps remove the waste products from the blood. New blood and dialysate constantly flow into the dialyzer and waste products and excess fluids constantly flow out.

Only a small amount of blood is out of the body at a time.

There must be a way to connect you to the artificial kidney machine. This access for connection is called a ‘fistula’ and requires minor surgery in 1 of your arms. A surgeon creates a fistula by attaching a vein to an artery. The vein will get bigger as there is more blood flowing through it. It takes at least 6-8 weeks for the vessels to become large enough to insert fistula needles.
Two needles can then be placed in the larger blood vessels. These needles are connected to tubes which go to the artificial kidney machine.

For some people, a fistula is not an option. In these cases, a tunneled hemodialysis catheter will be inserted in your chest.

What is a tunneled hemodialysis catheter?

- A tunneled hemodialysis catheter is a tube made of special plastic that is used for your hemodialysis treatment.
- A doctor inserts the catheter under the skin of the chest into a large vein leading to your heart. A small incision is made near this vein. This site is called the “insertion site” and it is where the hemodialysis catheter tip is threaded into the vein.
- You will notice that the catheter has 2 lumens (tubes) coming from your chest; however, there is only 1 line inserted under your skin.
- One lumen is used to carry blood from your body to special tubing connected to the dialysis machine. The other lumen returns the cleaned blood back into your body.
• The catheter is “tunneled” under the skin of the chest and the 2 lumens can be seen on the outside of the chest. This is called the “exit site”.
• A cuff under the skin near the exit site helps to keep the catheter in place.
• You may have a stitch and/or bandage strips at the insertion and exit sites.
• Your hemodialysis nurse will remove the bandage strips and stitch at the insertion site in about 7-10 days. The stitch at the exit site usually gets removed in about 6-8 weeks.

Home hemodialysis

Advantages
• You can swim, bath, or shower any time, for those patients with a fistula.
• You can lift heavy objects.
• Depending on the type of hemodialysis you choose, you may have days off - dialysis every other day with a 2 day break once a week (conventional dialysis).
• Less restricted diet with short daily or nocturnal dialysis.

Disadvantages
• Not easy to travel.
• Restricted diet, if conventional dialysis is chosen.
• Training time is longer.
• May need a helper.
To do home hemodialysis:

You must have a good working fistula or a tunneled hemodialysis catheter.

• For a fistula:
  » Good access to your blood supply is needed because 2 needles must be placed in your arm for each dialysis treatment. We will teach you (or your helper if needed) how to insert these needles.

• Tolerate the dialysis treatment without major problems:
  » Your safety is our first priority. We will assess how you tolerate the dialysis treatments before any decision is made about you doing these treatments at home.

• Train for 6-8 weeks:
  » Training is one-to-one. This means 1 nurse teacher and 1 dialysis learner and partner.
  » You may want to have a helper with you when having your dialysis treatment. This is assessed on an individual basis. If you want or require a helper, this person will attend the training session with you. Your helper may be a family member or a friend.
  » It takes about 6-8 weeks to learn how to do the hemodialysis treatments. If you require a partner/helper, your dialysis partner will learn with you. You will not start home hemodialysis until you are sure how to do the treatment, and we are sure you are comfortable with your dialysis.
• Have a permanent space in your home for the hemodialysis machine:
  ›› Choose a space where you will be comfortable. Some special plumbing and electrical outlets will need to be placed in your home. You will also need storage space for the supplies.

Space needed for home hemodialysis
• The dialysis machine is 2 feet wide x 2.5 feet long x 6.5 feet high. It will be supplied by the hospital (Home Dialysis Program).
• Water treatment (4 feet x 2 feet) is also supplied by the hospital (Home Dialysis Program). This has to be connected to your dialysis machine.
• You need a La-Z-Boy® style chair which will go flat with the feet up, or a bed if you are choosing nocturnal hemodialysis.
• There must be enough room so a person can move around the chair.
• Good lighting and a phone are needed in the dialysis room.
• Special electrical outlets, a drain, and water supply need to be placed in your home. This will not be done until you start training. The hospital will cover the installation costs. Any reversal or removal of these will be at your own expense.
• Additional renovation costs will be at your own expense (such as flooring, cupboards).
Supplies: You will need an area where you can store 20-24 medium-sized boxes each month in your home. Your supplies must not get wet or freeze. You will need a few supplies in your dialysis room.

Supplies for hemodialysis will be delivered every month or two depending on the company. You will have to buy Javex® and vinegar to disinfect your machine.

Water treatment for hemodialysis
The bath that cleans the blood during a dialysis treatment is mostly water and some dialysis fluid. The water used in dialysis comes from your tap. All water used for dialysis must be treated. You will be asked to send 1 or 2 bottles of your home tap water to the Home Dialysis Unit for testing.

A dialysis technician will decide what type of water treatment will be best for you. Most people need to have water treatment tanks installed to treat the water before it can be used for dialysis. The dialysis technician will install the water treatment system.

You will also need to have some minor plumbing done so the dialysis machine can be hooked up properly. The cost of the water treatment and plumbing is covered by the Home Dialysis Program.
Other special considerations for home hemodialysis

• If you live in an apartment, you must have written permission from the landlord to have the hemodialysis machine and water system installed in your apartment.

• Tenant or home insurance is strongly recommended.

• You must allow for nursing or biomedical tech visits in your home (by appointment) as deemed necessary. Visits will be arranged as required on an individual basis.

If you have any questions, please ask.
We are here to help you.
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If you have any questions, please ask your healthcare provider.

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