



PATIENT EDUCATION  
*Home Dialysis Options*

learning **EDUCATION** EXCELLENCE  
**HEALTHY** CARING INTERACTION  
**LIVING**

BARBARA WOODWARD LIPS  
PATIENT EDUCATION CENTER



# Choosing At-Home Dialysis

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You can do two types of dialysis at home. You can do either peritoneal dialysis or home hemodialysis.

This information explains each kind of home dialysis. Think about which kind may fit your lifestyle best. It's likely many factors may contribute to your decision on how to manage your kidney disease.

Doing dialysis at home brings both advantages and disadvantages. Each person has different needs and desires. Knowing what to expect from home dialysis can help you decide what is best for you.

Be sure you understand all your options. Understand possible risks and benefits before you make a choice. Talk with your health care team about your decision. Ask questions. Your health care team wants to help you make the decision that is best for you. They are here to help you.

Once you are at home, many problems can be taken care of over the phone. Home dialysis nurses are available during the day. A nephrologist is available 24 hours a day.

## **Possible benefits for dialysis at home**

Doing dialysis at home allows you to:

- Stay at home to do your dialysis. You control your dialysis schedule. This can save you time and money. You can plan dialysis when it works best for you— as long as you follow your treatment plan.
- Possibly have fewer restrictions about what you can eat or drink.
- Drive less. While you still come in for appointments, you don't need to drive back and forth for your dialysis. Driving back and forth to the center can take a lot of time. It can be an added expense. Also, it can be stressful for you and your family.
- Stay healthier. You have a greater chance of exposure to infection in a center. Studies show that people who do dialysis at home go to the hospital less often. They also have fewer problems with their access.
- Take dialysis supplies and equipment with you when you travel. An at-home dialysis machine is portable. This makes it easier to travel.

## **Possible disadvantages for dialysis at home**

Doing dialysis at home may bring some challenges:

- You need to have a special space in your home for the treatment and supplies. It's important to keep your dialysis equipment organized.
- Doing treatment and helping with treatments can cause stress for you and your loved ones.

# Peritoneal Dialysis at Home

Peritoneal dialysis removes extra fluid, chemicals and wastes from your blood. This kind of dialysis uses your own peritoneal membrane to filter the wastes from your blood. The membrane is a thin lining in your abdomen.

Dialysis solution flows through a thin tube that is placed into your abdomen. See Figures 1 and 2. The solution stays in your abdomen from 90 minutes to 4 hours. Then the fluid is drained and fresh solution added.

You do peritoneal dialysis every day. Because peritoneal dialysis is done every day, you have fewer changes in your fluid and waste levels throughout the day.

You can do peritoneal dialysis in your home or at work. You attend training classes to learn how to do it. These classes typically take up to 10 days.

If you are going to do peritoneal dialysis, you have a peritoneal catheter placed through your abdominal wall. The catheter is surgically placed about four weeks before it can be used. The catheter exit site is allowed to heal before this dialysis begins.

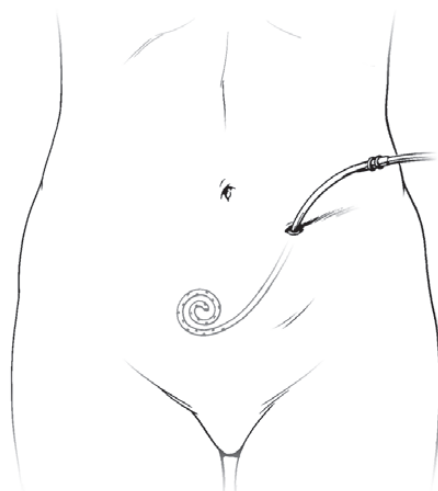


Figure 1. Peritoneal catheter

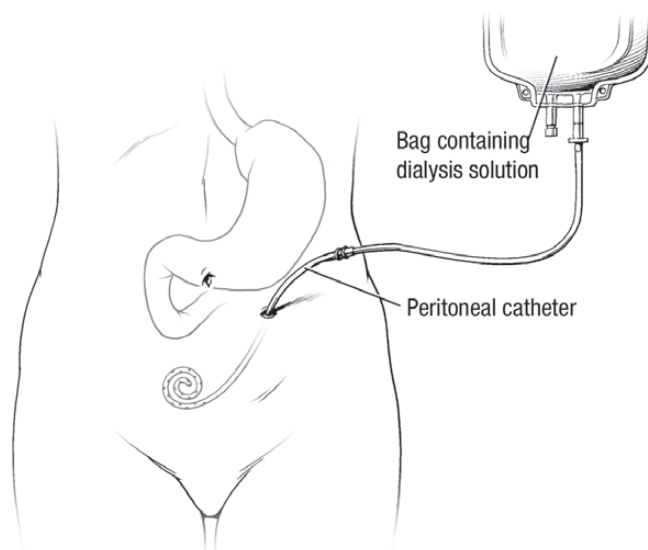


Figure 2. Peritoneal dialysis

## Possible risks and side effects of peritoneal dialysis

Possible risks and side effects include:

- An infection in the peritoneal cavity or catheter site.
- Catheter problems.
- Hernias.
- Weight gain.

## Follow-up requirements

Doing peritoneal dialysis at home includes:

- **Follow-up visits.** Your return visits are scheduled monthly. You need to return after one month of home dialysis to see a home dialysis nurse, social worker, nephrologist, and a dietitian.
- **Lab collection.** Every month you need to give samples, such as blood or urine. The samples are sent to a lab for analysis.
- **Record keeping.** You are required to keep records. Every month, you provide those records for your care team. You are contacted with any changes that need to be made based on the information in your records.

## Kinds of peritoneal dialysis

There are two ways to do peritoneal dialysis.

- **Continuous ambulatory peritoneal dialysis (CAPD)** uses 4 to 5 dialysis exchanges throughout the day. This is known as continuous ambulatory peritoneal dialysis, or CAPD.
- **Continuous cycling peritoneal dialysis (CCPD)** uses a machine to do continuous cycling peritoneal dialysis while you sleep. This way is also called automated peritoneal dialysis (APD).

# Continuous Ambulatory Peritoneal Dialysis (CAPD)

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CAPD exchanges dialysis solution four to five times each day, seven days a week. The exchanges are spaced throughout the day — morning, noon, later afternoon, and before bedtime.

Each exchange takes about 30 minutes. You can plan these times around your daily activities. Dialysis occurs between exchanges while the dialysis solution is in the peritoneal cavity. See Figure 3.

CAPD uses the following to meet your body's needs and to ensure you get the right waste removal:

- A specific solution volume.
- Certain number of exchanges.
- Prescribed times for the solution to dwell.

## Things to think about with CAPD

When you do CAPD, you:

- Can be flexible with exchange times.
- Can do the exchange in different places.
- Don't need a dialysis machine.
- Can do it throughout the day.
- Need about one week of training.
- May be able to maintain the renal function you have today.

The following medical conditions can affect whether CAPD is the best option for you:

- Your nutritional state. Low blood albumin levels need to be corrected before peritoneal dialysis is considered.
- Hernias, which are weak spots in the abdominal wall. A hernia may need to be repaired and allowed to heal before you can start this dialysis.
- Chronic back pain. The extra weight of the dialysis solution can aggravate back pain.
- Recent abdominal surgery.
- An ileostomy or a colostomy.
- Abdominal aneurysm repair.
- Diabetes. You may need to change how you manage your diabetes.

Self-esteem and body image may affect whether CAPD is the best choice for you:

- A catheter and short tubing are always present.
- Your waistline will expand because solution is present in your peritoneal cavity at all times.
- You may gain weight from sugar (dextrose) in the dialysis solution.

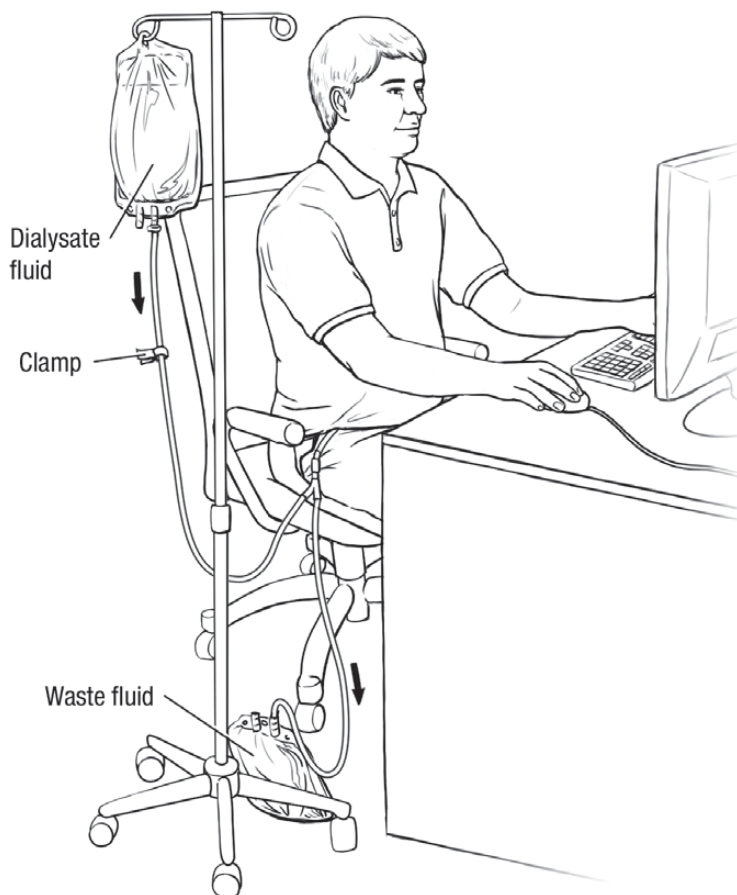


Figure 3. Continuous ambulatory peritoneal dialysis (CAPD)

### Doing CAPD at home

When doing CAPD at home, you are required to have a room where you can close the door and have privacy. Pets should not be allowed in this room. This room must have:

- A sink that is close to the room.
- Good lighting.
- A sturdy table or counter that can withstand repeated washing.
- A comfortable chair.

Store enough supplies for a few days in a small cupboard or on shelves near your dialysis area. You store a month's supplies at a time. You must store them in an area in your home where you can control the temperature. The area must remain clean and dry.

Dialysis solution, tubing sets and other supplies are delivered to your home every month. You learn how to order these supplies during training.



# Continuous Cycling Peritoneal Dialysis (CCPD)

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Continuous cycling peritoneal dialysis uses a cycler machine to do exchanges every night. This takes 8 to 12 hours. It happens while you sleep. See Figure 4. You also may hear CCPD referred to as automated peritoneal dialysis.

CCPD uses the following to meet your body's needs and to ensure you get the right waste removal:

- A specific solution volume.
- Certain number of exchanges.
- Prescribed times for the solution to dwell.

## **Things to think about with CCPD**

Be sure to discuss any medical conditions and concerns with your nephrologist. With CCPD you:

- Can ask family members who are not around during the day to support you in the evening if you need help.
- Are connected to a machine for 8 to 12 hours every night.
- Train for up to two weeks to learn how to do this dialysis.
- Have daily treatment, so fluid, chemicals and waste do not build up between treatments.
- May have less chronic back pain or hernias than with CAPD.
- May need to change how you manage your diabetes.
- May be able to maintain the renal function you have today.

## Other things to think about with CCPD

You may not have as much flexibility as you do with CAPD because:

- You need both the dialysis machine and electricity. If a power failure occurs, CAPD is required until power is restored.
- You need to be hooked up to the cyclor machine for 8 to 12 hours every night.
- The cyclor machine requires larger, heavier bags of solution than CAPD. You or your helper need to be able to lift these.



Figure 4. Person getting CCPD treatment while sleeping

## Doing CCPD at home

When you do CCPD at home, you are required to have a room where you can close the door and have privacy. Pets should not be allowed in this room. This room must have:

- A sink that is close to the room.
- Good lighting.
- A sturdy table or counter that can withstand repeated washing.
- A comfortable chair.
- Space next to your bed for the cyclor machine.
- A three-prong electrical outlet for the cyclor machine.
- Your bed elevated to help gravity adequately drain the solution. Use blocks or an extra mattress to elevate your bed.

Store enough supplies for a few days in a small cupboard or on shelves near your dialysis area.

You also must have an area in your home where you can control the temperature. The area must remain clean and dry. You store a month's supplies at a time. Dialysis solution, tubing sets and other supplies are delivered to your home monthly. You learn how to order these supplies during training.

# Hemodialysis at Home

Hemodialysis puts your blood through a filter called a dialyzer. It takes extra fluid, chemicals and wastes from your blood. Hemodialysis is another way to treat end-stage kidney disease.

You may decide home hemodialysis is the best treatment for you. If so, you do it up to six times a week. The amount of time you spend doing each dialysis is different for each person.

You are encouraged to have a helper for this type of dialysis. You and your helper need about four weeks of training that you take together. **Note:** Medicare and most insurance companies do not pay for an in-home helper.

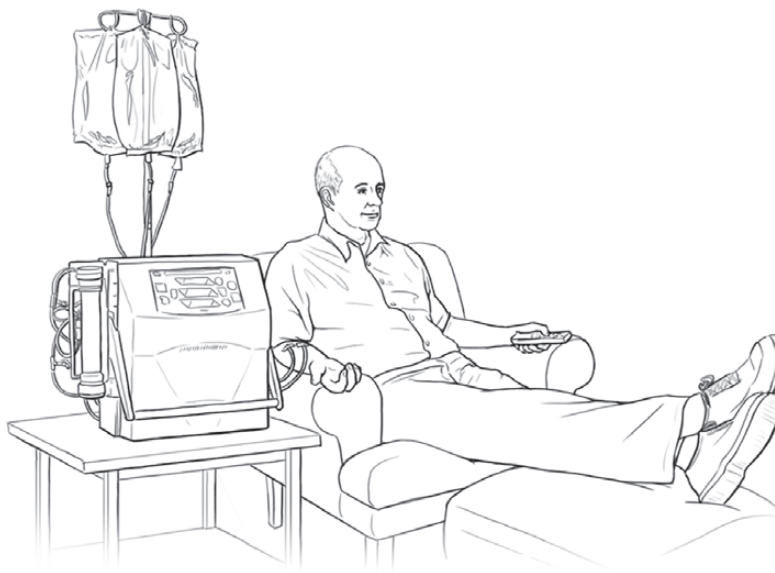


Figure 5. Home hemodialysis

## Access to your bloodstream

With hemodialysis, you need an access to your bloodstream. The access is the place where your blood is withdrawn and returned to you during dialysis.

Your access can be through an AV fistula or AV graft. This is a short way to refer to an arteriovenous (AV) fistula or graft. An arteriovenous connection is one made between an artery and a vein.

Both require surgery:

- **AV fistula** lasts a long time and has few risks. It usually takes two to three months to heal before it can be used.
- **AV graft** is used for people who have small veins. It can be placed and ready to use in one month.

It is important to protect the veins in your arms. This is so the veins can be used for a dialysis access if needed. A peripherally inserted central catheter, called a PICC, can harm the veins. Sometimes your veins then cannot be used for a dialysis access.

You should contact a nephrologist or ask your health care team to contact a nephrologist before you have a PICC put in your arm. There may be other options.

Your health care team recommends that your access be placed well before you begin hemodialysis. This is so the access is ready when you need it. Your dialysis care team shows you how to care for your access site.

## Possible risks and side effects of hemodialysis

- Problems with access, such as difficulty placing needles, infection and bleeding.
- Low blood pressure.
- Muscle cramps.

## Follow-up requirements

In order to do hemodialysis at home, you need to follow these monthly requirements:

- **Follow-up visits.** Your return visits are scheduled monthly. You need to return after one month of home dialysis to see a home dialysis nurse, social worker, nephrologist, and a dietitian.
- **Lab collection.** Every month you need to give samples, such as blood or urine. The samples are sent to a lab for analysis.
- **Record keeping.** You are required to keep records. Every month, you provide those records for your care team. You are contacted with any changes that need to be made based on the information in your records.

## Doing home hemodialysis

When you do home hemodialysis, you are required to have a room where you can close the door and have privacy. Pets should not be allowed in this room. This room must have:

- A sink that is close to the room.
- Good lighting.
- A comfortable chair.

Before you begin, you'll need a water filter system. Your health care team helps you with this. Your home water is tested after it is filtered to make sure it meets standards. These water tests happen throughout your treatment.

You also must have an area in your home where you can control the temperature. The area must remain clean and dry. You store a month's supplies at a time.

Dialysis solution, tubing sets and other supplies are delivered to your home every month. You learn how to order these supplies during training.

# Notes

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### BARBARA WOODWARD LIPS PATIENT EDUCATION CENTER

Mrs. Lips, a resident of San Antonio, Texas, was a loyal Mayo Clinic patient of more than 40 years and a self-made business leader who significantly expanded her family's activities in oil, gas and ranching. Upon her death in 1995, Mrs. Lips paid the ultimate compliment by leaving her entire estate to Mayo Clinic. By naming the Barbara Woodward Lips Patient Education Center, Mayo honors her generosity, her love of learning, her belief in patient empowerment and her dedication to high-quality care.

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