Peritoneal Dialysis

"Is it the right choice for me?"

Leading a more typical life

THIRD EDITION

Peritoneal Dialysis:

Is it the best choice for me?

Introduction

This booklet has been written for patients like you who are now on hemodiaylsis and thinking about a treatment change, or those who are about to begin dialysis and want to know more about peritoneal dialysis as a treatment option.

Written under the guidance of dialysis patients and renal care nurses, social workers, doctors, and others, this booklet has one goal: To help you learn if peritoneal dialysis (PD) is the right treatment option for YOU.

NOTE: All words that appear like this: - *hemodialysis* also appear at the end of the booklet. In this last section, you will find the meaning of each of these words.

How does PD differ from other types of dialysis?

There are a couple of ways to help patients with kidney failure remove impurities and waste materials from the blood. *Dialysis* is the medical treatment for the removal of wastes and extra fluids from the blood that the kidneys can no longer remove.

Hemodialysis is the type of dialysis that cleans your blood by taking it outside of your body. On the other hand, *peritoneal dialysis* (PD) can be done inside of your body. Here's how it works:

A thin membrane called the peritoneal membrane lines the abdomen. This membrane also covers the organs that fit within the abdominal cavity.

It is *semipermeable*, which means it only lets certain things pass through it. PD uses this membrane to filter your blood during dialysis.

How does this happen?

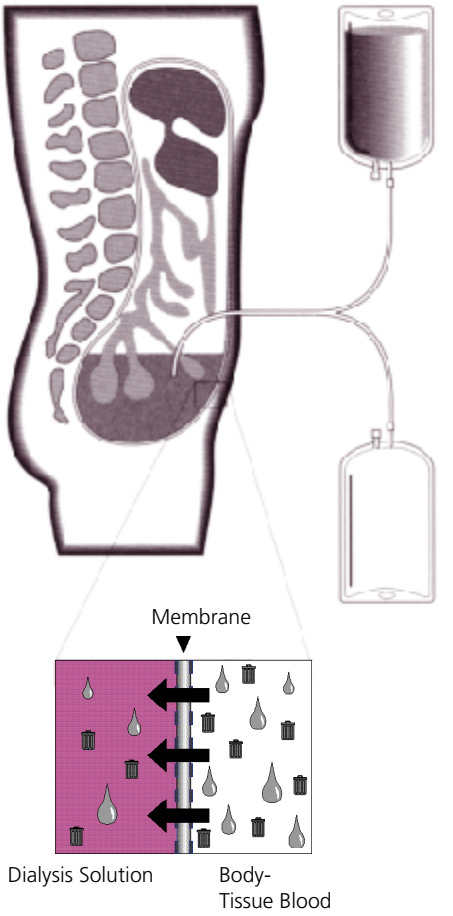
First, a small, soft tube, called a *catheter*, is surgically placed through the abdominal wall into the *peritoneal cavity*. Depending on the type of catheter placed, this permanent access can usually be used for peritoneal dialysis therapy 10-14 days after the procedure.

This tube allows the passing of *dialysis solution* into the peritoneal cavity. The peritoneal cavity is then filled with 2 to 3 liters (a little over 2-3 quarts) of fluid, which most adults can comfortably hold.

Once the dialysis solution is inside the peritoneal cavity, waste products then pass or filter from the bloodstream, through the peritoneal membrane, and into the dialysis solution. From there, waste products will be removed from your body. This is called the dwell phase of a peritoneal dialysis exchange, and can last a few hours at a time.

Later, the used dialysis solution is drained from the peritoneal cavity and replaced with fresh solution. The draining and replacing of dialysis solution is called an "*exchange*" or "*cycle*". The type of PD done and your doctor's prescribed treatment plan will determine the number of exchanges or cycles needed per day.

Waste products (shown as trash cans) and excess water (shown as water drops) cross the membrane and move into the dialysis solution by the processes of *osmosis* and *diffusion*.



Is PD a cure for kidney failure?

NO. No form of dialysis is a cure for kidney failure. However, over the last 30 years, advances in medicine have allowed doctors to duplicate some of the normal kidney functions. PD is one of these advances.

Types of peritoneal dialysis

Is there more than one type of PD?

There are two types of PD. One is CAPD or Continuous Ambulatory PD. The other is APD or Automated PD.

CAPD

This type of self dialysis is done 7 days a week, 4 to 5 exchanges each day, without the use of a machine. CAPD is often called "machine-free dialysis".

Here's how CAPD works using an "exchange" procedure. You perform an exchange by following a few basic steps that are taught to you during training.

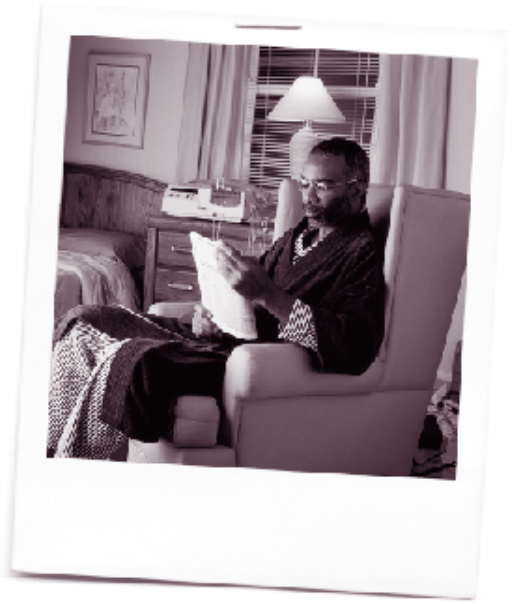
First, your PD catheter is connected to a tubing set. The solution, which is present in your abdomen from a previous exchange must first be drained out of the peritoneal cavity into a pre-connected bag. This bag is placed below the level of the abdomen allowing the fluid and wastes to flow out of the body by gravity. Once the fluid has completely drained from your peritoneal cavity, the fresh dialysis solution flows through your catheter, filling the peritoneal cavity with the prescribed amount of fluid. The bags and tubing set are then disconnected from your catheter and discarded. It is during the "dwell" phase, when the fluid remains in your peritoneal cavity, that the actual dialysis or filtering of waste and fluid occurs. With no connection to the tubing or bags during the dwell, you are free to enjoy your daily activities while the dialysis takes place inside of your peritoneal cavity.

Typically, you do 4-5 daily exchanges. Each exchange lasts about 30 minutes and is done every 4-6 hours. Your last evening exchange remains or "dwells" inside your peritoneal cavity overnight while you are sleeping.

Using the CAPD dialysis method gives you the freedom to do dialysis at home, work, or during vacation. That means you can continue to enjoy your life, be it retirement or working, going to school, traveling, hobbies and other activities, just like you did before you started dialysis.

APD

In Automated PD, the exchanges of dialysis solution are done by a machine while you sleep. These exchanges are referred to as "cycles".



At bedtime, you connect your catheter to a tubing set designed to fit into the front of the cycler machine. This then allows attachment to the bags of dialysis fluid required during the night. APD occurs 7 days a week, for approximately 10 hours each night. The machine and solution are placed near the bed, usually on a night table. While you sleep, the APD machine controls all three phases of the cycles: draining used solution, re-filling with fresh solution, and monitoring the time the solution remains inside the peritoneal cavity (dwell time).In the morning, the machine does a "final fill" for most patients. That means, the solution stays in the peritoneal cavity until bedtime the next night or until the next required exchange of fluid occurs.

In either case, you and your renal care team can discuss the option that best fits your needs.

How do I know how well the peritoneal dialysis therapy is working?

Simple, routine tests are scheduled by the PD nurse. This involves taking samples of blood and drained fluid from the peritoneal cavity which are then sent to a lab. The results show how well the peritoneal dialysis is clearing wastes from the bloodstream. Your doctor may make changes based on the individual results of these tests. This helps to ensure that your dialysis prescription is providing good removal of waste and excess fluid from your body. Remember, any changes that your doctor makes will be in your best interest so as to provide you with the best dialysis and quality of life on peritoneal dialysis therapy.

What does PD Involve?

Will I be trained to do everything right?

You will receive one-on-one or small-group training to give you the skills you need to perform the right dialysis treatment. This custom training usually takes between 5 days to a few weeks, and is done by a qualified nurse. There's no need to be afraid of going "solo". Your nurse will be there every step of the way to make sure you do things right.

Getting ready/storing supplies

Once trained, you'll be able to prepare for and conduct proper PD "exchanges". You'll also receive advice on how to store your supplies. CAPD frees you from being connected to a machine. So, you can perform an exchange in any private, well-lit, clean place where you can prepare for it.

If you use APD, you will need a small table or nightstand next to your bed to place the cycler machine and fluids needed for the night. This machine is pictured on page 4.

You will need a space about 4-feet high by 6-feet long to store one month's worth of supplies. This is a little less than the size of a walk-in closet.

How do I get my supplies? What if I have questions?

You'll never be out of touch with your product customer service person or renal care team. A month's worth of supplies will be sent once a month or more often according to a specific location and convenient schedule. You can even have them sent to your job site or vacation spot, if that is more convenient. You can call your 24-hour toll-free product support line for answers to questions about product use or orders.

New lifestyle aspects

How will having a catheter affect my everyday life?

Peritoneal dialysis is NOT painful. After the catheter is inserted and the area is healed, it is painfree. You may feel a sensation when the fluid begins to flow into or out of your peritoneal cavity during an exchange. But after a little while, you should not even notice this or the extra fluid in your abdomen. Your body, too, will quickly adjust to the exchange and easily hold the extra fluid.

Does my catheter need special care?

YES: You must be very careful to keep your catheter site and tubing clean and free from contact with bacteria that can cause illness.

REMEMBER: ALWAYS wash your hands with soap and water BEFORE you touch your catheter. NEVER let your tubing or any part of the connection touch anything that would contaminate them. If this happens, it can lead to an inflamed peritoneal membrane and cavity. This condition is called *peritonitis*. It is painful and requires medication to heal it.

Your renal care team will review the proper way for you to do an exchange and care for your catheter. By strictly doing what they show and tell you, you can help avoid this problem.

Will having a catheter affect my sexual function?

NO. Patients with catheters enjoy sex lives that are as normal as anyone else's. Your having a catheter or being on PD will NOT inhibit you from having sexual relations with your partner. The catheter should be secured in place, so no tugging or pulling occurs.

What about diet? Are there any guidelines?

YES, you will have to watch what you eat. In fact, all forms of dialysis restrict the individual's diet to some extent. Some treatment options, like hemodialysis, have more restrictions than others. PD lets you have more protein, fluids and potassium in your diet. Please discuss this matter with your renal dietician.

Your renal care team will advise you on how to adjust your diet plans and eating habits around your new dialysis treatment.

How active can I be on PD?

An exercise routine is VERY helpful for all dialysis patients. With PD, it is wise to keep a few points in mind:

- Normal housework and lawn work are typically not restricted
- Discuss your participation in exercise and sports with your doctor

The bottom line is: you CAN be active in sports, exercise, and other physical activities while on PD!

How different will my life be on PD?

Whether retired, at a job, at home, in school, or in a nursing home, you can conduct your PD anywhere you have privacy and a well-lit environment. There is some adjustment: Changing your daily schedule to allow for dialysis, planning for supplies, and learning a treatment technique. You might want to discuss this option with others who use this form of therapy. Groups such as those listed on the back cover include many patients who have shared their personal stories to help individuals like you make this important decision.

Likely Candidates for PD

What kind of patients are candidates for PD?

A wide variety of patients can benefit from PD

Those wanting a lifestyle with more freedom and flexibility as compared to the more regimented in-center hemodialysis schedule (eg, those who travel, are retired, with busy work/home schedules, or attend school)
Those with diabetes, cardiovascular disease, or hypertension
Patients who live a long way from their dialysis unit and /or who have had problems with hemodialysis
Individuals whose peritoneal membrane can handle the daily needs of this option.

PD...Is it the best choice for me?

Can you relate to the patient descriptions, or with any of the topics in this booklet? If so, you might want to consider PD. Your renal care team will help you decide if PD will give you the therapy AND lifestyle you are looking for. Remember to ask all your questions. And be up front with any concerns, or goals you have. Your renal care team is here to help you make the best treatment choice.

Glossary

You have read or hear the following words or phrases describe dialysis. Below is the meaning of each term.

Catheter (KATH-it-ter) A sterile, soft tube surgically inserted in the body for dialysis purposes. It extends outside the body about 2 to 4 inches.

Dialysis (DYE-al-lih-sis) A process whereby materials are removed from your blood through a semipermeable membrane.

Dialysis Solution (DYE-al-lih-sis So-LEW-shun) Solution of chemicals used during dialysis to help rid the bloodstream of toxins and waste materials.

Diffusion (DIF-fu-shun) The act by which dissolved substances move from a region of a higher concentration to one of a lower concentration. (See diagram on page 2).

Dwell Time (Duh-well Ty-me) The amount of time dialysis solution remains in the peritoneal cavity.

Exchange (X-change) The draining and replacement of used dialysis solution.

Hemodialysis (HEE-MO-Dye-al-lih-sis) Dialysis performed outside the body, using your blood and an artificial filter.

Osmosis (OZ-moe-sis) The movement of a fluid through a semipermeable membrane. (See diagram on page 2.)

Peritoneal Dialysis (PEAR-i-toe-nee-al DYE-al-lih-sis) Dialysis performed inside the body, using the patient's own peritoneum as a filter.

Peritoneal Membrane (PEAR-i-toe-nee-al MEM-brain) The lining of the abdominal cavity.

Peritonitis (PEAR-i-to-nye-tis) Inflammation of the peritoneal membrane.

Renal (REE-nal) Pertaining to the kidneys.

Semipermeable Membrane (SEM-EE-Per-mee-able MEM-brain) a layer of tissue that allows certain substances to pass through it.

Baxter would like to thank the patients, nurses, doctors, technicians, and social workers who gave input into the development of this educational booklet.

Read all about it…

To learn more, ask your doctor and renal care team members for information about dialysis. You can also contact such groups as:

American Association of Kidney Patients (AAKP)
1-800-749-2257
http://www.aakp.org
This patient membership group provides education and support programs for the kidney patient.

American Kidney Foundation (AKF)
1-800-638-8229
http://www.akfinc.rg
This group serves as a financial resource for kidney dialysis and transplant patients who need help.

National Kidney Foundation (NKF)
1-800-622-9010
http://www.kidney.org
This national voluntary health agency is dedicated to wiping out kidney and urological disease, and providing programs and services to patients and their families.

Social Security Administration (SSA)
1-800-772-1213 to find the nearest Social security office
http://www.ssa.gov

Medicare
1-800-MEDICARE or 1-800-633-4227
http://www.medicare.gov

www.kidneydirections.com
An online educational resource

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