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The Facts of Peritoneal Dialysis

What is Peritoneal Dialysis?

Peritoneal dialysis (PD) is a dialysis option for patients with kidney failure. Similar in hemodialysis, in that it cleans the blood of impurities, it does not use an artificial kidney or dialyzer. PD occurs inside the body using the peritoneal membrane as a filter. The membrane surrounds your intestines, bowel and other organs. It has many holes that can be used to strain waste products and other chemicals from your blood.

How does peritoneal dialysis work?

PD works by filling your peritoneal cavity with a germ free liquid called dialysate. This liquid sits in your peritoneal cavity while waste products and fluids move from your blood through the peritoneal membrane. Remember, this membrane acts like a strainer. It keeps the good things in your body and only lets out the toxins and extra fluid. The dialysate, toxins and extra fluid are then drained out of your body. The peritoneal cavity is then refilled with the clean dialysate and the process begins again. Each time the dialysate is drained and refilled, it's called an exchange. The number of times you perform an exchange depends on which type of PD you choose and on your prescription.

Is there more than one type of peritoneal dialysis?

Yes, there is more than one type of peritoneal dialysis. Continuous Ambulatory Peritoneal Dialysis is the most common type of PD. It can be done in any place that's clean and well lit. This type of self-dialysis is done 7 days a week. Four to five exchanges of new solution are done each day. During an exchange, which takes about 30 minutes, the solution that was inside the peritoneal cavity is drained and new solution is instilled. The new solution remains in the cavity for 4 to 6 hours – this is called the dwell time.

The last evening's exchange dwells overnight to allow for an uninterrupted night's sleep. Continuous Cycling Peritoneal Dialysis (CCPD), also known as Automated Peritoneal Dialysis (APD), is done at home with a machine called a cycler. This is done at night while you sleep, for 8 to 10 hours, 7 days a week. The machine controls the cycles: draining the solution, re-filling the solution and monitoring the dwell time. In the morning, clean dialysate is left in the peritoneal cavity after you disconnect from the machine. Just like hemodialysis, peritoneal dialysis has both pros and cons. You'll need to look at both to see if peritoneal dialysis suits your lifestyle best.

This information is given to you so you and your family can make a decision that's best for your overall health and well-being.

Continuous Ambulatory Peritoneal Dialysis (CAPD)

Pros

- Can be done in many locations, which makes it easier to travel.
- No needles.
- Control over-schedule/freedom.
- No machine needed
- Less restricted diet

Cons

- Treatments are every 4-6 hours every day.
- Your abdomen is always full of fluid, which may increase the size of your belly.
- You have a catheter in your abdomen.
- Everything must be very clean during the exchange.
- Increased risk of infection either in the peritoneal cavity or at the site of your catheter
- Storage of supplies.

Continuous Cycling Peritoneal Dialysis (CCPD)

Pros

- You can go about your daily routine.
- You don't need a partner.
- Dialysis is usually done while you sleep.
- You have fewer fluid and diet restrictions.
- No needles needed.
- You can easily switch to CAPD when traveling.

Cons

- A machine is needed.
- You may have to do an exchange during the day.
- You may be awakened during the night by the machine's noises.
- You have a catheter in your abdomen.
- Everything must be very clean during the exchange.
- Increased risk of infection either in the peritoneal cavity or at the site of your catheter.
- Storage of supplies.

Key words:

Catheter: (1) Sterile tubing that is inserted into a vein in the neck or chest to allow for temporary hemodialysis. (2) Sterile tubing that is surgically placed in the abdomen which allows for the exchanges in

peritoneal dialysis.

Cycler: Term used to describe the machine that is used to perform continuous cycling peritoneal dialysis (CCPD).

Dialyzer: A part of the hemodialysis machine that removes wastes and extra fluid from the blood.

Exchange: Term used to describe each time the dialysate used in peritoneal dialysis is drained and refilled.

Peritoneal Cavity: The space in the abdomen that holds the major organs. The inside of this space is lined with the peritoneum.

Peritoneal Membrane: A sac, resembling cellophane with tiny holes that serves as a lining of the abdominal cavity and holds organs in place within the peritoneal cavity.

Peritoneum: The lining of the peritoneal cavity.

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