

Boise Kidney and Hypertension

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Kidney Dialysis

What is kidney dialysis?

Kidney dialysis is a mechanical way to do the work your kidneys normally do. It:

- Cleans your blood by removing wastes.
- Removes extra water and helps control blood pressure.
- Helps your body keep the proper balance of chemicals such as potassium, sodium, and calcium.

When is it used?

Dialysis is used when you have kidney (renal) failure. If kidney failure is not treated, you will have too much water and chemical waste in your blood, which can cause death.

Dialysis is generally started when your kidneys are working at less than 10% of their normal function. There are 2 kinds of kidney failure: acute (sudden) and chronic (long-lasting). If you have acute kidney failure, you may need dialysis until the cause of the kidney failure is corrected. If you have the chronic form, you may need dialysis for the rest of your life.

The use of dialysis depends on:

- why your kidneys stopped working
- your other health conditions
- your overall health.

How is it done?

There are 2 types of dialysis: hemodialysis and peritoneal dialysis. Neither type is painful.

Hemodialysis is the most common method of dialysis. Your blood is filtered through a machine. The machine takes out wastes and extra water. Before your first treatment, an access to your bloodstream must be made. It provides a way for blood to be carried from your body to the dialysis machine and then back into your body.

The access can be created in different ways:

- A plastic tube (catheter) is inserted into a large vein in your neck, chest, or leg near the groin.
- You have minor surgery to create a connection between an artery and a vein, usually in the forearm. A connection called a fistula can be made using your own blood vessels. Or a connection called a graft can be made using a synthetic tube.

You will be given an anesthetic before the access is created so the procedure will not be painful.

When you have hemodialysis, the dialysis machine is attached to the access with a needle. It is usually done about 3 times a week in special clinics by trained staff. In some cases it can be done at home with a helper. Each treatment takes about 3 to 5 hours. During treatment, you can read, write, sleep, talk, or watch TV.

In **peritoneal dialysis (PD)** the lining of your abdomen (the peritoneal membrane) is used to filter your blood. A small, soft tube called a catheter is used to fill your abdomen with a mixture of minerals and sugar dissolved in water. This cleansing liquid is called dialysis solution. The dialysis solution travels through the catheter into your abdomen. Wastes, chemicals, and extra water move into the dialysis solution. After a certain time, the

solution is drained from your abdomen through the tube, taking the wastes from your blood with it. Your abdomen is then filled again with new dialysis solution. Each cycle of filling and draining is called an exchange.

PD can be done in different ways. One form, called continuous cycler-assisted peritoneal dialysis (CCPD), uses a machine called a cycler to fill and drain your abdomen, usually a few times while you sleep. CCPD is also sometimes called automated peritoneal dialysis (APD). Another form of PD called continuous ambulatory peritoneal dialysis (CAPD) does not need a machine: All you need is gravity to fill and empty your abdomen. With CAPD, you do manual exchanges of fluid a few times during the day.

Before your first treatment, the catheter used for PD is placed into your abdomen through a small cut near your belly button. Your healthcare provider will make the cut and insert the catheter after you have been given a general or local anesthetic.

What are the benefits of dialysis?

Dialysis does the work your failed kidneys would normally do. It keeps your blood clean and healthy.

If you have kidney failure, dialysis can help you live longer and improve your quality of life. If you are very sick, dialysis may seem like nothing but a burden that only prolongs suffering. Discuss this with your healthcare provider.

What are the risks of dialysis?

Possible problems with **hemodialysis** are:

- problems with the access to your blood vessels, such as infection, blockage from clotting, and poor blood flow
- muscle cramps
- a sudden drop in blood pressure, which can make you feel weak, dizzy, or sick to your stomach.

The most common problem with **peritoneal dialysis** is a serious abdominal infection called peritonitis. The infection can be treated with antibiotics. Tell your healthcare provider right away if:

- You have a fever.
- The used dialysis solution has an unusual color or cloudiness.
- The area around the catheter is red or painful.

How can I take care of myself?

- Carefully follow the diet prescribed by your healthcare provider.
- Do not drink more liquids than your provider recommends.
- Take medicines exactly as prescribed by your provider.
- If you are having hemodialysis, tell your provider if you have muscle cramps or feel weak, dizzy, or sick to your stomach.
- If you are having peritoneal dialysis, tell your provider if you have signs of abdominal infection.

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This content is reviewed periodically and is subject to change as new health information becomes available. The information is intended to inform and educate and is not a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional.

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