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, which helps control blood pressure and swelling.
- Helps your body keep the right 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. This could kill you.

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 (slow-developing and permanent). 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 decision to use dialysis depends on:

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

How is it done?

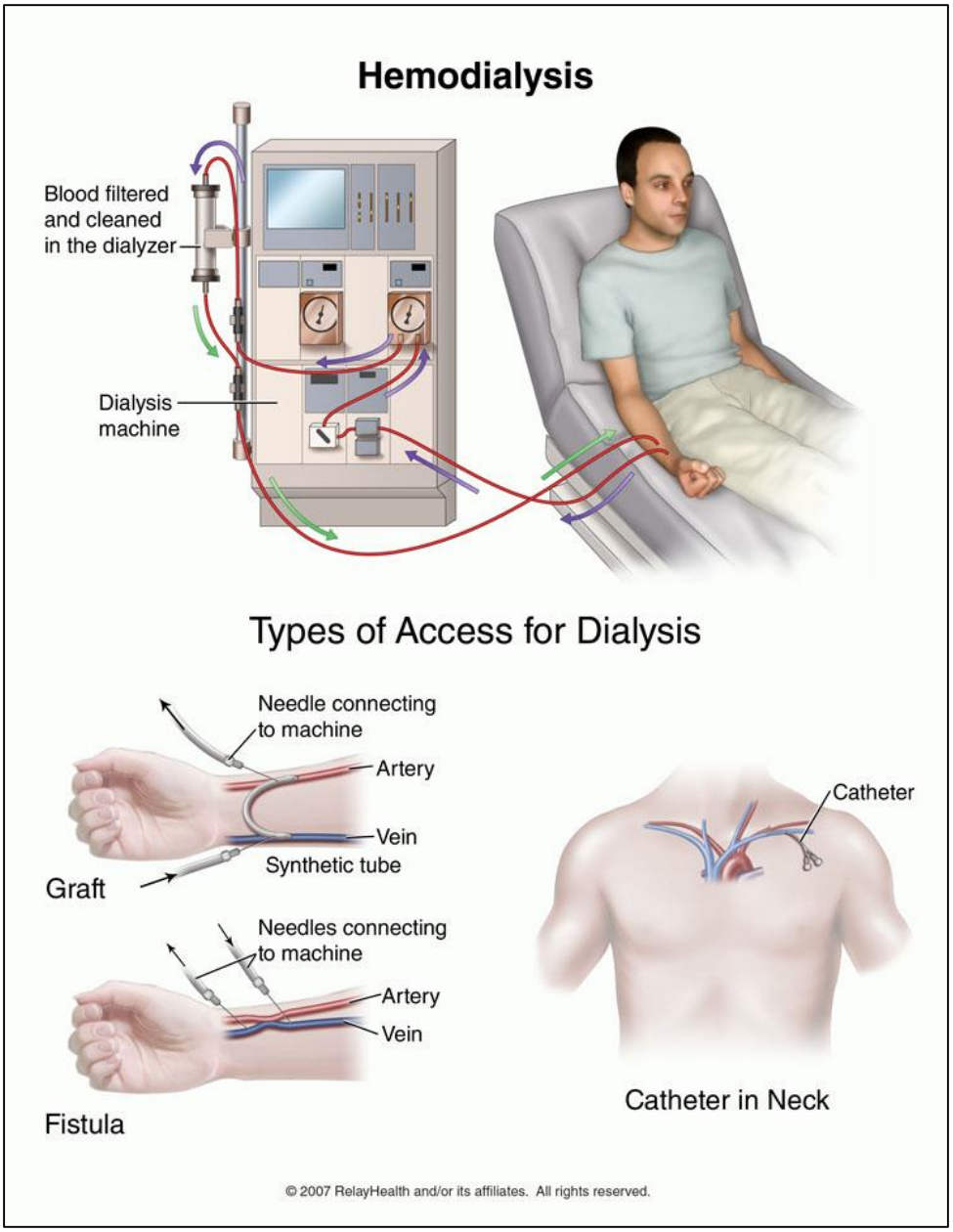
There are 2 types of dialysis: hemodialysis and peritoneal dialysis. Neither type is painful.

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. The connection is 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 a dialysis clinic. In some cases it can be done at home with a trained helper. Each treatment takes about 3 to 5 hours. During treatment, you can read, write, sleep, talk, or watch TV.



Peritoneal dialysis (PD) uses the lining of your abdomen (the peritoneal membrane) to filter your blood. A small, soft tube called a catheter is used to fill your abdomen with minerals and sugar dissolved in water. This cleansing liquid is called dialysis solution. Wastes, chemicals, and extra water move into the dialysis solution while it is in your abdomen. After a certain time, the solution is drained from your abdomen through the catheter, taking the wastes 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.

- **Continuous cycler-assisted peritoneal dialysis (CCPD)** uses a machine called a cycler to fill and drain your abdomen. It is usually done a few times while you sleep. CCPD is also sometimes called automated peritoneal dialysis (APD).
- **Continuous ambulatory peritoneal dialysis (CAPD)** uses gravity instead of a machine to fill and empty your abdomen. With CAPD, you do manual exchanges of fluid a few times during the day. You drain a fresh bag of dialysis solution into your belly by hanging the bag higher than your belly. For a number of hours you let the fluid work inside your belly to remove the waste fluids. Then you drain the fluid from your belly by hanging the bag at a level lower than your belly catheter.

Before your first treatment, the catheter used for peritoneal dialysis is put into your belly through a small cut near your belly button. Your healthcare provider will make the cut and insert the catheter after you have been given an anesthetic. The catheter will be closed with a clamp or valve when you are not having dialysis.

Your provider will give you a schedule for how often you will need to have dialysis. You will have frequent weigh-ins and lab work to make sure the dialysis is helping you get rid of wastes and keep a good balance of minerals.

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. If you are otherwise healthy, dialysis may allow you to keep working or enjoying the things you like to do.

If you are very sick and have other health problems, dialysis may seem like a burden that only prolongs your suffering.

Having dialysis is a very personal decision to be discussed with your family and your healthcare provider.

What are the risks of dialysis?

Possible problems with **hemodialysis** include:

- 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 serious problem with **peritoneal dialysis** is an abdominal infection called peritonitis. The infection can be treated with antibiotics.

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.
- Follow the dialysis schedule as prescribed.
- 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 right away if you have these signs of infection:
    - You have a fever.
    - You have belly pain.
    - The used dialysis solution has an unusual color or cloudiness.
    - The area around the catheter is red or painful.

Developed by RelayHealth.
Adult Advisor 2012.1 published by RelayHealth.
Last modified: 2011-06-02
Last reviewed: 2011-02-01

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.

References
Adult Advisor 2012.1 Index