

Dialysis and Access Types Fact Sheet for People with End-Stage Renal Disease

Why Is Kidney Dialysis Needed?

Your kidneys have many important jobs:

- To act as your body’s cleaning filter;
- To adjust the amount of acid in your blood; and
- To take away toxins and extra fluid from your body in urine.

When your kidneys can’t do these jobs, dialysis is another way to take the acid, toxins, and fluids (waste) out of your body.

What Are the Different Kinds of Dialysis?

There are two different kinds of dialysis:

- Peritoneal dialysis
- Hemodialysis

	Peritoneal Dialysis	Hemodialysis
Where dialysis takes place on your body	Through a tube in your stomach area	Through your blood vessels
How long dialysis takes	4 – 6 hours	3 – 4 hours
How often dialysis is done	Several times a day or overnight	3 times a week
Where dialysis is done	At home	At a dialysis facility or at home

What Is Peritoneal Dialysis?

One way you may get dialysis is through the inside of your stomach area in what is called the peritoneum. This type of dialysis uses a thin layer of tissue inside your belly to remove waste from your body.

To have peritoneal dialysis, you will need a small surgery to put a tube into your stomach area. A special fluid called dialysate is put into the tube to draw out your waste, and is later emptied from your body through the same tube. The dialysate stays in your peritoneum for four to six hours, called a “dwell time.” During the dwell time, you can do all of your normal activities.

There are two ways the dialysate can be taken out of your body after the dwell time. One way is through continuous peritoneal dialysis (CAPD), where the dialysate is taken out of your body four to six times a day. The other way is automated peritoneal dialysis (APD), where the dialysate is taken out while you sleep. Both CAPD and APD are done at home by you or someone you choose (a family member or friend).

What Is Hemodialysis?

Hemodialysis (“hemo” means blood) is done when a dialysis machine is attached to your body through your blood vessels. The place on your body where the dialysis machine is attached is called vascular access. When you have hemodialysis, your blood is sent outside of your body in the dialysis machine (sometimes called an artificial kidney) where the waste is taken out. Your cleaned blood is then returned to your body. This can take three to four hours. Usually, you have hemodialysis three times a week at an outpatient dialysis center, or every day at home. If you go to a dialysis center, then a medical professional will do your dialysis. If your dialysis is done at home, then you or someone you choose (a family member or friend) would do your dialysis.

How Are Blood Vessels Reached for Hemodialysis?

There are three ways to reach blood vessels for hemodialysis:

- Central venous catheters (VC)
- Arterio-venous grafts (AVG)
- Arterio-venous fistulas (AVF)

	Central Venous Catheters	Arterio-Venous Grafts	Arterio-Venous Fistulas
How blood vessels are reached	Through a large tube put in a large vein, usually in your chest and neck region.	Surgery is done to join a medium-sized artery with a medium-sized vein. The artery and vein are joined with tubing or animal vein tissue.	Surgery is done to join a medium-sized artery with a medium-sized vein. The artery and vein are joined with your own vein and artery.
Advantages	<ul style="list-style-type: none"> • Ready to use right after they are put in. 	<ul style="list-style-type: none"> • Stay in for a long time. • Put in your non-dominant arm (left arm if you are right-handed) so you can easily use your arm and hand. 	<ul style="list-style-type: none"> • Preferred when they can be used. • Stay in longest time. • Put in your non-dominant arm (left arm if you are right-handed) so you can easily use your arm and hand. • Least likely to become infected.
Disadvantages	<ul style="list-style-type: none"> • Stay in shortest time, and are used when blood vessels must be reached right away or when other ways don't work. • More likely to become infected or to clot-off. • May hurt blood vessels by making them smaller. 	<ul style="list-style-type: none"> • Take two to three weeks before they can be used. 	<ul style="list-style-type: none"> • Take six weeks before they can be used. • May not work for some people who use dialysis.

How Does Medicare Help to Make Care Better for People with End-Stage Renal Disease?

Medicare has put in place the End-Stage Renal Disease (ESRD) Quality Incentive Program (QIP). In this program, each outpatient ESRD facility is measured on the quality of the care it gives. Facilities that don't give care that meets Medicare's standards are paid less.

The way blood vessels are reached in hemodialysis is an important ESRD QIP quality performance measure. Medicare encourages the use of AVFs because they are less likely to give you an infection or complications. Using AVFs is also in line with a joint effort between Medicare and the ESRD Networks to make care better through the Fistula First Initiative. While some quality of care performance measures may change from year to year, the main goal of paying dialysis facilities for how well they give care stays the same.