

## Chronic Kidney Disease and Dialysis

Chronic kidney disease (CKD) that progresses to a point of 15 percent or less renal capacity is known as end stage renal disease or ESRD. Dialysis replaces the work of failed kidneys and can be a life-saving treatment for patients with ESRD.

### What does dialysis do?

Dialysis cleanses your blood when your kidneys can't do the job. It rids the body of waste, excess salt and water and helps control blood pressure. There are two different types of dialysis: hemodialysis and peritoneal dialysis.

### How are the two different?

**Hemodialysis** is the most common dialysis method. It pumps blood out of the body to an artificial kidney machine, called a dialyzer, and returns it to the body through tubes.

**Hemodialysis** allows blood to flow, a few ounces at a time, through a special filter that removes wastes and extra fluids before being returned to the body. This helps balance chemicals (sodium and potassium, for instance) in the body.

Patients must follow a strict dialysis treatment schedule.

- At a clinic: Most people go to a clinic—or dialysis center—three times a week for four to five hours each visit.
- At home: Hemodialysis treatments can be done at home by a trained family member or friend. Home dialysis offers more flexibility, but you must maintain a regular schedule.

**Peritoneal dialysis** uses the inside lining of the abdominal cavity, the peritoneum, to act as a natural filter. Wastes are removed by means of a cleansing fluid and washed in and out of the abdominal cavity (belly) in cycles.

**Peritoneal dialysis** employs a soft plastic tube, or catheter, which is surgically placed in the abdominal cavity. A sterile cleansing fluid is run through the catheter to filter wastes. The fluid later leaves the body through the catheter. There are two types of peritoneal dialysis.

- *Continuous Ambulatory Peritoneal Dialysis (CAPD)* is continuous, machine-free and allows a person to go about normal daily activities. A plastic bag of cleansing fluid is attached to the catheter. Gravity pulls the fluid into the abdomen when the bag is raised to shoulder level. After four to six hours in the belly, the waste-filled fluid is drained back into the bag and discarded. The cycle is repeated with fresh solution. This process typically is done three to four times a day and then overnight.

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- *Continuous Cycling Peritoneal Dialysis (CCPD)* differs from CAPD in that a machine, called a cyclor, delivers and then drains the cleansing fluid. The treatment is usually done at night while you sleep, with the machine performing several exchanges of the dialysis fluid. The last fill in the morning remains in the abdomen for the day until the next night-time cycle.

### **Which dialysis method is better?**

Both have pros and cons. Your Renal Specialists of Houston doctor will help you determine which method is better for you.

**Hemodialysis** is often easier for patients and their families, requiring only that you come to a dialysis center at your scheduled times. However, you are more likely to experience fatigue and low blood pressure after treatments.

**Peritoneal dialysis** requires more work for you since the dialysis is performed at home. On the plus side, fluid is more easily controlled and this may reduce stress on the heart and blood vessels. Daily activities and travel are easier to manage.

### **Is dialysis expensive?**

Yes, it is, but for most patients, the federal government now pays 80 percent of all dialysis charges, while private insurance or state medical assistance pays the rest. When done properly, dialysis is an effective treatment for kidney failure.