

## Fast Facts

### Dialysis

- Used to treat kidney failure (uremia)
- Job of your kidneys is to filter waste products from your bloodstream and dialysis replaces this process
- Helps to better control blood pressure and sustain the proper balance of fluid and minerals
- Several things can increase of developing kidney failure: diabetes, high blood pressure, kidney inflammation, blood vessel inflammation and kidney cysts (all progress over a period of time, so kidney damage isn't evident immediately)
- Some conditions cause rapid shutdown of the kidneys: severe illnesses, complicated surgeries heart attacks and certain medications

#### *Hemodialysis*

- Connected to a machine (dialyzer)
  - Filters your blood from your body through the machine, which cleans it, and then it is transfused back into your body
- Three types of access:
- Central venous catheter with two ports*
- A plastic tube is inserted in a large vein in your neck or groin to provide access to bloodstream
  - Temporary
  - Allows for immediate access under emergent conditions
  - High risk for infection (mainly used in hospitals or until one of the other two options is ready to use)

#### *Arteriovenous (AV) fistula*

- Surgeon connects an artery and a vein inside your arm (typically in your non-dominant arm)

#### *Arteriovenous (AV) graft*

- A flexible synthetic tube is used to connect one of your arteries to one of your veins
- Used if your blood vessels are too small to make an AV fistula

#### Process:

- Inserting two needles (one in the artery side and one in the vein side) of your fistula or graft
- Needles are connected to tubes that go to the dialyzer

#### *Peritoneal Dialysis*

- Similar to hemodialysis in that it removes wastes from your body, but how it does it is different
- Involves having a plastic tube surgically placed into your abdomen, typically near your bellybutton
- You will use the tube to inject the cleaning solution (dialysate) into your abdomen
- Solution stays in there for a period time (dwell time), usually four to six hours, during which it filters wastes from your body through the tiny blood vessels lining your abdominal cavity
- After the dwell time has elapsed, you remove the fluid via the tube and discard it in a sterile collection bag

#### Schedule:

#### *Continuous ambulatory peritoneal dialysis*

- Fill your abdomen with fluid and let gravity do most of the work
- Often needs to be done three to five times during a day with one longer dwell time while you're sleeping

#### *Continuous cycling peritoneal dialysis*

- Fill your abdomen with the dialysate in the morning, the dwell time lasts all day and at night, while you are sleeping, you are connected to a machine that performs multiple exchanges

- In either type, you can do your normal activities during the dwell times

-One side removes small amounts blood from your body at a time sending it to the machine to be cleaned and the other side receives your clean blood from the machine and infuses it back into your body  
-Done slowly and your blood pressure and heart rate are monitored throughout since they can fluctuate

Schedule:

-Each person is different in how their treatment is set up  
-Some people do longer sessions (three to five hours) three times a week  
-Others do shorter sessions (two to three hours) six or seven times a week

-Dialysis centers allow people to receive the treatment they need without having to be in the hospital  
-Centers are located across the United States and in some other countries, you can travel and still get your hemodialysis (plan ahead by checking a center's availability)

-Your doctor will monitor your weight, blood pressure, heart rate and certain blood tests (ex. urea reduction ratio, total urea clearance and blood chemistry levels) to adjust the intensity and frequency as needed

Good for People Who:

-Can't handle the rapid changes in fluid balance that occur in hemodialysis  
-Want to reduce the impact of dialysis on their daily activities  
-Have some residual kidney function

Not Good for People Who Have:

-An abdominal hernia or scarring from previous abdominal surgeries  
-Limited ability to care for yourself  
-Diverticulitis/inflammatory bowel disease  
-Protein malnutrition  
-Critical illness

-Unfortunately, many people who start with peritoneal dialysis have further decline in kidney function and require hemodialysis or a kidney transplant at some point

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