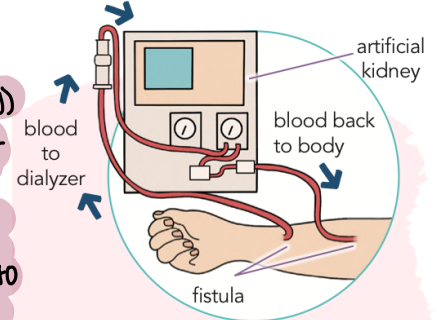


# hemodialysis

most common method of dialysis  
uses a dialyzer (artificial kidney) to remove  
excess fluids & toxins

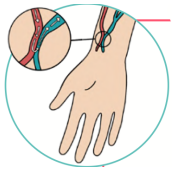
Outside the body



dialyzer (artificial kidney)  
↓  
brings blood to dialyzer  
↓  
filters out toxins/wastes  
↓  
brings clean blood back to body

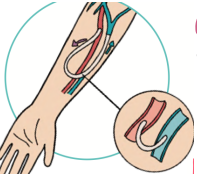
3x a week (3-5 hour treatment)  
@ clinic

## ACCESS



**fistula:** surgical anastomoses of artery & vein  
• take 6-8 weeks to develop & last 3-5 years

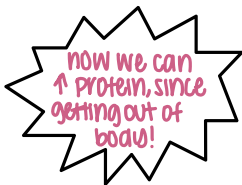
Wash skin w/ soap & water or antiseptic



**Graft:** inserting synthetic graft material between artery & vein  
• ↑ risk of infection dit synthetic material insertion

## Evaluation of patency

- feel the thrill (palpate fistula) } every 4 hours
- hear the bruit (auscultate) } could indicate a clot
- ↳ if absent, postpone further use & report



## COMPLICATIONS

- hypotension
- disequilibrium syndrome  
solutes are removed too quickly causing brain cells to swell  
↳ restlessness & disoriented\*
- hemorrhage
- air embolus
- electrolyte imbalance

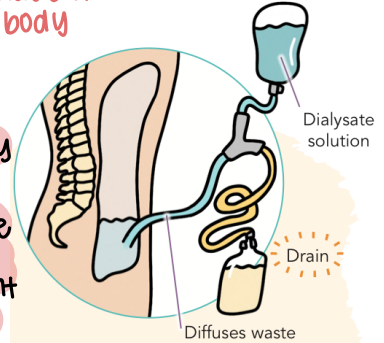
## Pt education

- on arm that has vascular access **AVOID**
  - compression
  - blood draws
  - BP readings
- **fistula:** squeeze or grip rubber ball - blood flow  
↳ edema is normal - resolves as body adjusts  
↳ not normal: pallor & paresthesia

# peritoneal dialysis

uses peritoneum to remove excess fluids & toxins

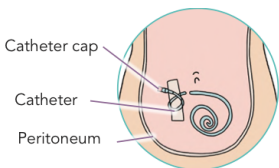
Inside the body



Warm solution  
↓  
dialysate is infused into peritoneal cavity by gravity (2L/10 mins)  
↓  
close clamp on infusion line  
↓  
dialysate dwells for set amt of time (dwell-time)  
↓  
drainage tube unclamped  
↓  
fluid drains from peritoneal cavity by gravity (20-30 mins)  
↓  
new container of dialysate infused as soon as drainage complete

7x a week @ home!

## access



**peritoneal catheter**  
• temporary: inserted in cavity through abd wall  
• long-term: implanted in cavity

## COMPLICATIONS

- commonly done @ home & \* has ↑ risk of infections (affects WBCs)  
↳ sterile technique - **PRIORITY!**
- **peritonitis:**
  - cloudy/bloody drainage
  - fever, tachycardia
- hyperglycemia
- ↑ lipids
- **resp distress** - dit rapid infusion or over-filling abd (crackles, dyspnea)

## advantages

- less anemia
- reduced cost
- closer to normal function
- fewer dietary/fluid restrictions

## Pt education

- avoid infections
  - hand hygiene
  - clean site of cath daily
- turn side to side if not draining as expected!

## nursing management:

- SIS of fluid volume excess:
  - edema
  - dyspnea
  - tachycardia
  - bounding pulse
  - ↑ BP

- after dialysis completed do not adm injections for 2-4 hours  
↳ allows for metabolism & excretion of heparin

**CONTINUOUS AMBULATORY:** 2000 ml dialysate instilled by gravity  
**CONTINUOUS CYCLIC:** machine connected to dialysis cath

## Subclavian & femoral catheters:

- used for temp access for dialysis during acute renal failure while fistula or graft matures (dilates & toughens)
- or used for pts on peritoneal dialysis who need immediate access for hemodialysis session