

# RENAL DIALYSIS - RN -

2 Types of Dialysis :

- Hemodialysis
- Peritoneal dialysis

## HEMODIALYSIS

- – USED FOR RENAL FAILURE
- – TOXIC WASTES ARE REMOVED FROM THE BLOOD THROUGH SURGICALLY CREATED ACCESS SITE.
- – REMOVES EXCESS FLUIDS AND WASTE PRODUCTS AND RESTORES ELECTROLYTE BALANCE.
- – THE BLOOD THROUGH AN ARTIFICIAL SEMI PERMEABLE MEMBRANE.
- – STARTING THE THERAPY DEPENDS ON CLIENT SYMPTOMS NOT ON THE CREATININE CLEARANCE.

### ACCESS ROUTE:

AV Fistula

Internal anastomosis of an artery to an adjacent vein.

Take about 4-6 weeks to be ready for use.

One canula is inserted into an artery and another into a vein.

Dialysate- is made from clear water and chemicals and is free of any waste products or drugs.

### Anticoagulation

– to prevent blood clots from forming within the dialyzer or the blood tubing, anticoagulation is needed during HD treatments. Heparin is the most common used drug, to prevent clot from forming.

### Complications of Hemodialysis

Disequilibrium Syndrome, and Viral Infections.

#### Dialysis Disequilibrium Syndrome

- may develop during hemodialysis or after hemodialysis has been completed.
- the cause is thought to be due to rapid decrease in fluid volume and blood urea nitrogen (BUN) levels during HD.
- The change in urea levels can cause cerebral edema and increased intracranial pressure

Infection Can be caused by infected dialysate or AV fistula  
Sterile precautions +++

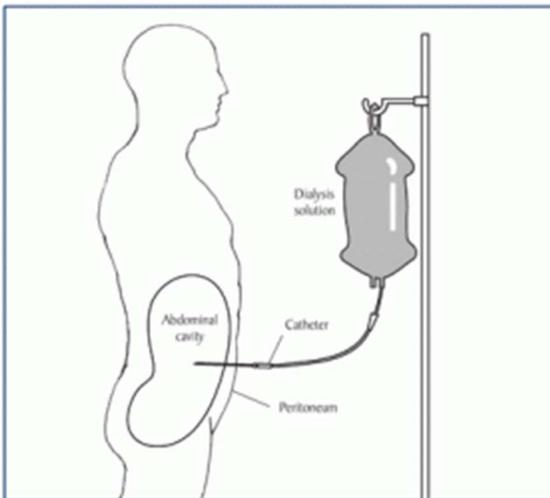
### Caring for Patient undergoing Hemodialysis:

- weight the client before and after dialysis
- know the client's dry weight
- discuss with the physician whether any of the ct's meds. Is withheld until after dialysis
- measure blood pressure, pulse rate, respirations and temperature.
- Take note that patient is at risk for fluid volume excess or deficit.

### SIGNS OF FLUID OVERLOAD

- HYPERTENSION
- TACHYCARDIA
- DYSPNEA
- CRACKLES IN LUNGS
- DISTENDED NECK VEINS

### PERITONEAL DIALYSIS



The client's peritoneal membrane will be used as a semipermeable dialyzing membrane.

*Hypertonic dialyzing solution* is instilled through a catheter that is being inserted into the patient's peritoneal cavity. Through the process of diffusion, the excess amount of concentration of uremic toxins and wastes in the blood moves across the peritoneal membrane and into the dialysis solution. After a certain time, the dialysis solution (along with the toxins and waste with it) is being drained. The client will be trained to do this procedure.

- - OCCURS IN THE PERITONEAL CAVITY
- - PERITONEAL DIALYSIS IS SLOWER THAN HEMODIALYSIS
- - AT TIMES, A CLIENT MAY USE PD UNTIL A NEW ARTERIOVENOUS (AV) FISTULA MATURES.
- - PD IS ALSO THE TREATMENT OF CHOICE FOR ADULTS BECAUSE ITS MORE FLEXIBLE.
- CONTINUOUS AMBULATORY PERITONEAL DIALYSIS
- THE DIALYSATE IS INSTILLED INTO THE ABDOMEN AND LEFT IN PLACE 4-8 HRS.
- WHEN IT IS TIME TO DRAIN, THE BAG IS ROLLED & FLUID IS DRAINED BY GRAVITY.