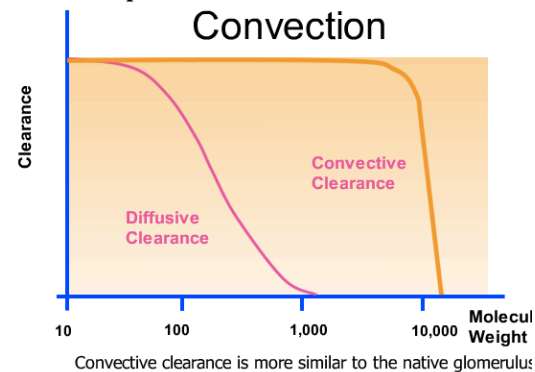


Convection

- Ultrafiltration, where water is removed by the application of a pressure gradient across the dialysis membrane
- Convection is the process by which solute is also dragged with this fluid shift and is removed into the dialysate
- Bulk removal of water and any solute in the water which is small enough to pass through pores will be removed

Convection can be useful to remove larger molecules



Factors affecting ultrafiltration

- Transmembrane pressure (TMP)
- Membrane permeability
- Membrane surface area

Aims of Dialysis

- Fluid removal
- Solute removal
 - Sodium
 - Potassium
 - Phosphate
 - Toxic middle molecular weight molecules
- Extend life
- Be compatible with some Quality of life

Patient Factors

- Residual renal function
 - How much urine they continue to produce and whether they have any remaining kidney function at all
- Dietary intake of sodium, potassium, phosphate
 - If they are able to adhere to this then they are less likely to get dangerous variations in electrolytes
- Fluid intake
 - Fluid restriction for a dialysis patient who doesn't pass any urine can be around 1L/day, patients who have some residual renal function will be able to drink a little bit more
- Adherence to medications
 - Such as anti-hypertensives or phosphate binders in order to optimize their biochemistry
- Dialysis time
 - Important to attend all sessions and full prescribed time in order to get the maximum benefits