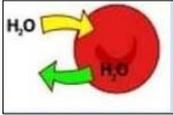
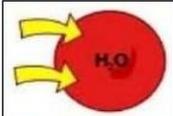
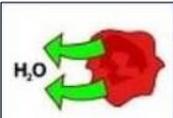


IV FLUIDS CHEAT SHEET

Solution	Type	Fluid Shift	Purpose	Used In	Contraindications
D5W	Isotonic (solution remains IN vessel) 	Expand ECF Volume	Supplies H2O/Glucose	Hypernatremia Fluid loss Dehydration	<ul style="list-style-type: none"> Head injury, Do not use in excess volume; in early post-op period, can lead to hyperglycemia. Use with caution in renal or cardiac disease. Monitor closely for fluid overload.
0.9%NS			Supplies Na+	Hypovolemia, Resuscitation, Shock, DKA, Met. Alkalosis Hypercalcemia, Mild Na+ def.	<ul style="list-style-type: none"> Monitor Na+ & Cl as overuse can cause fluid volume excess & hyperchloremic acidosis. Not desirable as a routine maintenance solution. Use with caution in renal disease, heart failure or edema. Monitor closely for fluid overload.
LR or RL (Lactated Ringers or Ringers Lactate)			Supplies K+, Ca, Na+	Hypovolemia, Burns, Fluid lost as bile or diarrhea, acute blood loss replacement	<ul style="list-style-type: none"> Lactate rapidly metabolized into HCO₃. Do NOT give if pH > 7.5 b/c bicarb is formed leading to alkalosis. Do not use in renal disease b/c increase risk of hyperkalemia. Monitor closely for fluid overload
0.45% NS	Hypotonic (Fluid shifts INTO cell) 	Provide Cl, Na+, free H2O	Rehydrate cells, Can be combined with isotonic solution	Hypertonic dehydration, Na+ & Cl depletion, gastric fluid loss DKA	<ul style="list-style-type: none"> Use with caution: Can cause cardiovascular collapse and increase ICP. Do not use for 3rd space fluids shifts (burns, trauma), IICP or CVA
0.33% NS					
0.225% NS					
D5NS	Hypertonic (fluid shifts OUT of cell) 	Increase ECF volume Decrease cellular edema	Expand extra cellular volume	Hyponatremia. Post-op fluid of choice decreased risk of edema. Stabilizes blood pressure, regulates urine output	<ul style="list-style-type: none"> Use with caution: it can cause intravascular volume overload & pulmonary edema. Do not use in: DKA, impaired heart or kidney function.
D51/2NS					
D51/4NS					
D5LR					
D10W				Replacement therapy if out of TPN	In the absence of TPN, infuse D10W at same rate as TPN. Monitor glucose levels closely.