



IV SOLUTION CHEAT SHEET

Type	Description	Osmolality	Use	Misc.
Saline (NS)	0.9% NaCl in water crystalloid solution	Isotonic (308 mOsm)	Increases circulating plasma volume when red cells are adequate	<ul style="list-style-type: none"> Replaces losses without altering fluids concentrations Helpful for Na⁺ replacement
½ Normal Saline (½ NS)	0.45% NaCl in water crystalloid solution	Hypotonic (154 mOsm)	Raises total fluid volume	<ul style="list-style-type: none"> Useful for daily maintenance of body fluid, but is of less value for replacement of NaCl deficit Helpful for establishing renal function Fluid replacement for clients who don't need extra glucose (diabetics)
Lactated Ringer's (LR)	Normal saline with electrolytes and buffer	Isotonic (275 mOsm)	Replaces fluid buffers pH	<ul style="list-style-type: none"> Normal saline with K⁺, Ca⁺⁺, and lactate (buffer) Often seen with surgery
D ₅ W	Dextrose 5% in water crystalloid solution	Isotonic (in the bag) *Physiologically hypotonic (260 mOsm)	Raises total fluid volume. Helpful in rehydrating and excretory purposes	<ul style="list-style-type: none"> Provides 170 – 200 calories / 1,000cc for energy Physiologically hypotonic – the dextrose is metabolized quickly so that only water remains – a hypotonic fluid
D ₅ NS	Dextrose 5% in 0.9% saline	Hypertonic (560 mOsm)	Replaces fluid sodium, chloride, and calories	<ul style="list-style-type: none"> Watch for fluid volume overload
D ₅ ½ NS	Dextrose 5% in 0.45% saline	Hypertonic (406 mOsm)	Useful for daily maintenance of body fluids and nutrition, and for rehydration	<ul style="list-style-type: none"> Most common postoperative fluid
D ₅ LR	Dextrose 5% in Lactated Ringer's	Hypertonic (575 mOsm)	Same as LR plus provides about 180 calories per 1000cc's	<ul style="list-style-type: none"> Watch for fluid volume overload
Normosol-R	Normosol	Isotonic (295 mOsm)	Replaces fluid and buffers pH	<ul style="list-style-type: none"> pH 7.4 Contains sodium, chloride, calcium, potassium and magnesium Common fluid for OR and PACU