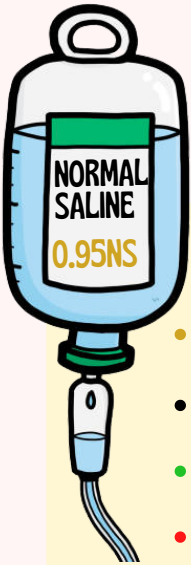




THE 4 MAIN TYPES OF IV FLUIDS



Normal Saline

Sometimes called 9% normal saline, NS, or 0.9NaCL.

- **ISOTONIC**, crystalloid (easily passes through the cell membrane)
- most widely used, for variety of conditions. works well for most hydration needs
- **used in conjunction with blood administration**
- **caution in** pt. with cardiac or renal complications, as the high sodium content can cause excess fluid retention

It can be used for things like:

1. Blood transfusion
2. Fluid replacement for patients suffering from diabetic ketoacidosis
3. Metabolic alkalosis
4. Hypercalcemia
5. Hyponatremia



Lactated Ringers

Sometimes work as an alternative for NS

- **ISOTONIC**, It's similar to the body's natural plasma & serum concentration
- **Lactate** commonly encountered in milk, our muscles produce it when we exercise.
- **Used in injuries & surgeries**
- **caution in** pt. with renal failure or renal complications as it can result in hyperkalemia.
 - > liver disease, as they cannot successfully metabolize the lactate.
 - > If pH level greater than 7.5

It's used to treat:

1. Dehydration
2. Burn victims
3. Hypovolemia resulting from third-space fluid shifts
4. Fluid loss in the lower gastrointestinal tract
5. Acute blood loss
6. Replacement of fluid and pH buffers

Half Normal Saline

Sometimes called 4.5% normal saline or 0.45NaCL.

- **HYPOTONIC**, crystalloid solution of sodium chloride dissolved in sterile water the difference is it's contains half the chloride concentration than 0.9NS
- **helpful for** diabetic Pt. who cannot handle additional glucose
- **avoided in** burns, liver disease, or trauma, as depletes intravascular fluids which are already low, risky with CVD, High ICP

It can be used for things like:

1. Raising your overall fluid volume
2. Water replacement
3. Sodium chloride depletion
4. Gastric fluid loss
5. DKA after normal saline and before dextrose infusions



Dextrose

Sometimes work as an alternative for NS

- **Simple sugar** used in processed foods & added to baking products as a sweetener
- The IV fluid acts as a carrier for dextrose, which acts as sugar readily available for cells to gobble up and **use as energy**.
- main versions of dextrose types:
 1. Dextrose in water > Raise your total fluid volume, Rehydration, Hyponatremia
 2. Dextrose in saline > such a specialized fluid, it's used for extremely specific cases
 3. Dextrose in Lactated Ringer's > name implies, used for fluid and electrolyte replenishment.



Reference

