



Acute hyponatremia can lead to **Cerebral Edema**

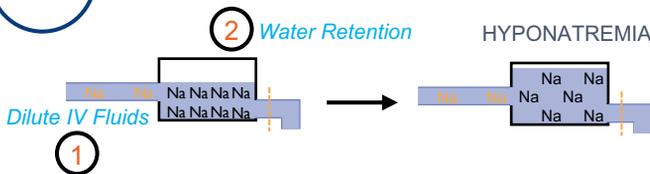


Acute: Less than 48 hours
Chronic: More than 48 hours



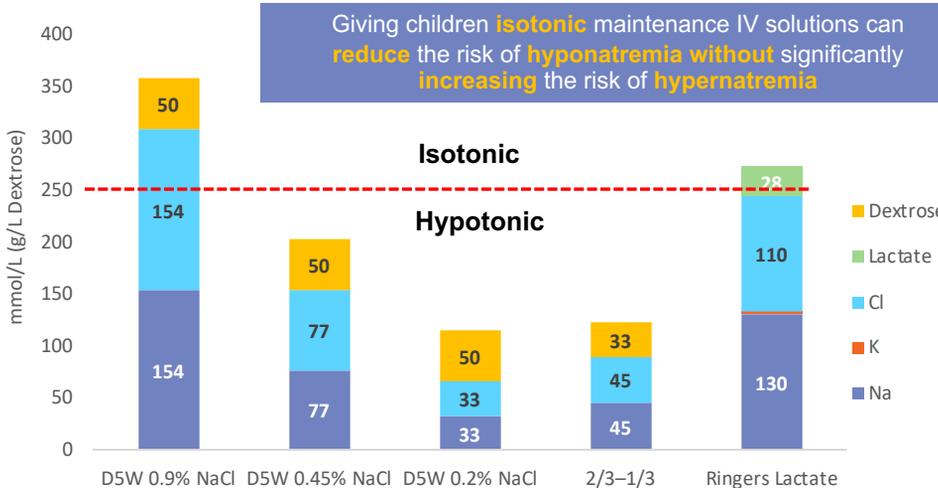
Hospitalized children who receive maintenance IV fluids are at an increased risk of hyponatremia

9-24% of these children **develop hyponatremia** to some degree. **Why?**



1 It was **routine practice** to give children **hypotonic IV solutions** with 20-30 mmol/L of Na.

2 Hospitalized children are at an **increased risk** of developing elevated **ADH secretion** due to nausea, stress, pain and medications like morphine



Monitor

- Baseline Electrolytes
Glucose, Urea, Creatinine
- Regular Electrolytes
- Intake, Output, Weights
- Symptoms of hyponatremia

Recommendations

- All hospitalized children receiving IV fluids are at risk for hyponatremia
- Oral fluids are generally hypotonic and should be accounted for when assessing total fluid intake
- Infants and young children require dextrose with maintenance fluids (eg. D5NS) as they have limited glycogen stores.
- Clinicians should be equally cautious when prescribing IV fluids as they are when prescribing medications.

Prescription of IV Fluids for Maintenance Requirements in Hospitalized Children

- Na Normal, ADH Risk **High** → D5NS
- Unknown Na → D5NS
- Na Normal, ADH Risk **Normal** → D51/2NS
- Na **High** → D51/2NS

Hypotonic fluids less than 0.45% NaCl **should not** be used for fluid maintenance

Ringer's Lactate is generally **not appropriate** as a maintenance fluid in children