

## Causes

- Abdominal surgery
- DM (c ↑ urination)
- Excessive diuretic therapy
- Excessive laxative use
- Diaphoresis
- Fever
- Fistulas
- Hemorrhage
- Renal failure (c ↑ urination)
- V, D

# Hypovolemia

Loss of fluids & solutes;  
3<sup>rd</sup> space fluid shift may occur; Most likely effects elderly & children.

## S/S

- ↓ in mental status
- Thirst
- Dizziness
- Nausea
- Tachycardia
- Delayed cap refill
- Orthostatic hypotension
- Cool, pale skin (arms/legs)
- Weight loss
- Flat jugular veins
- ↓ Central venous pressure
- Weak/absent peripheral pulses
- Urine output initially > 30 ml/hr and then < 10ml/hr

## 3<sup>rd</sup> Space Fluid Shift Causes

- Acute intestinal obstruction
- Acute peritonitis
- Burns (initial phase)
- Crush injuries
- Heart failure
- Hip fx
- Hypoalbuminemia
- Liver failure
- Pleural effusion

## Labs

- ↑ Serum Na<sup>+</sup> (> 145)
- ↓ Hgb & Hct (c hemorrhage)
- ↑ BUN & creatinine ratio
- ↑ USG (kidneys trying to conserve fluid)
- ↑ Serum osmolality

## Tx

- Isotonic fluids (NS, Lactated Ringers)
- Blood transfusion (if hemorrhaging)
- Vasopressor to maintain BP until fluids rise (i.e. dopamine)
- O<sub>2</sub> therapy
- Surgery (to control bleeding)