

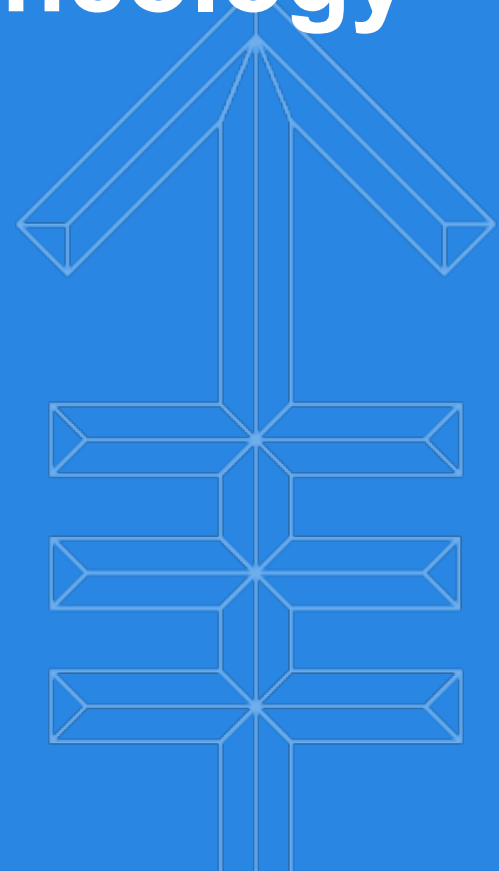


Memorial Sloan Kettering
Cancer Center

Hyponatremia in the Oncology Patient

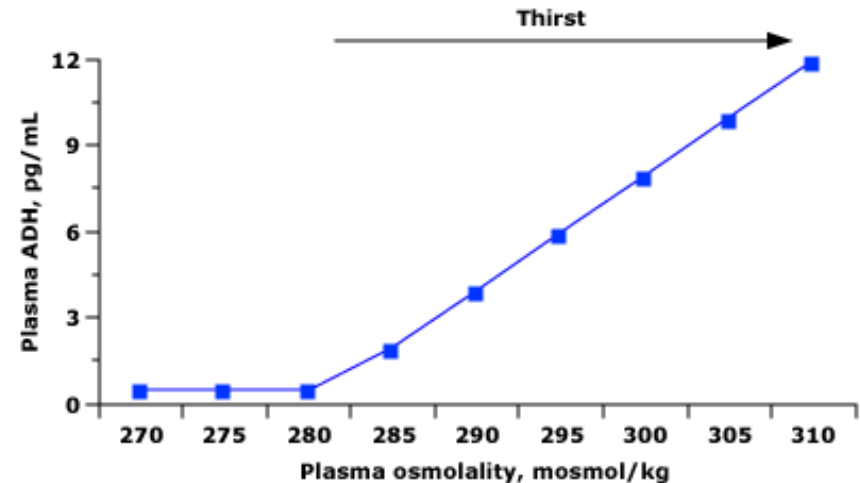
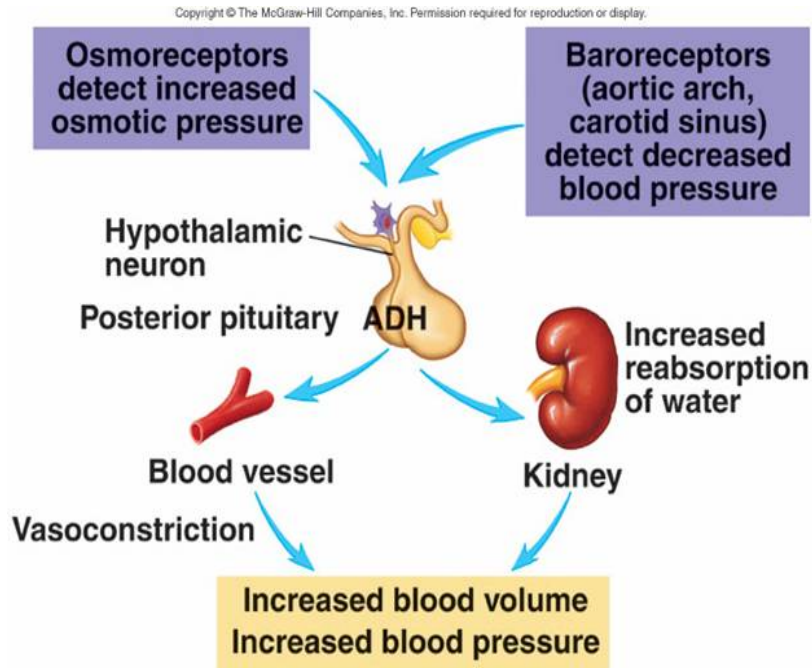
December 2022

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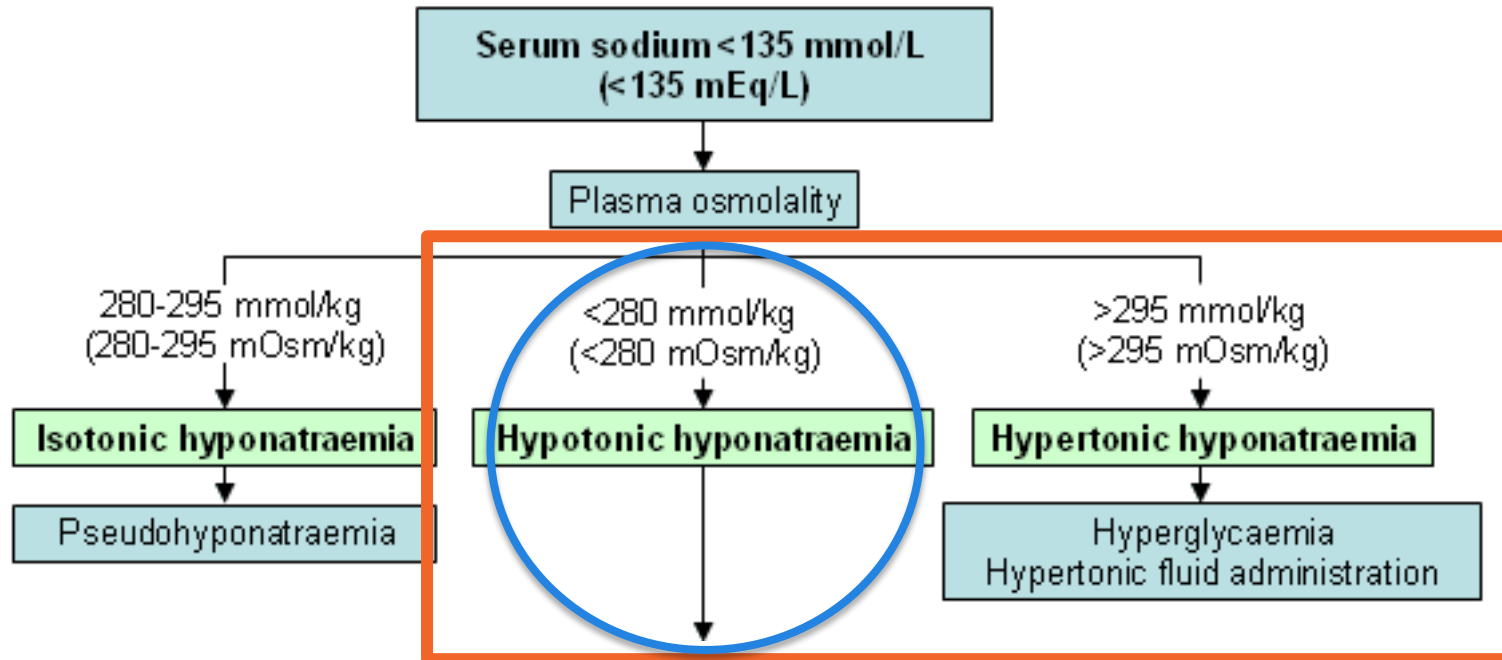
Relationship between Na, Water and ADH

Antidiuretic Hormone (ADH) “Water Saving Hormone”



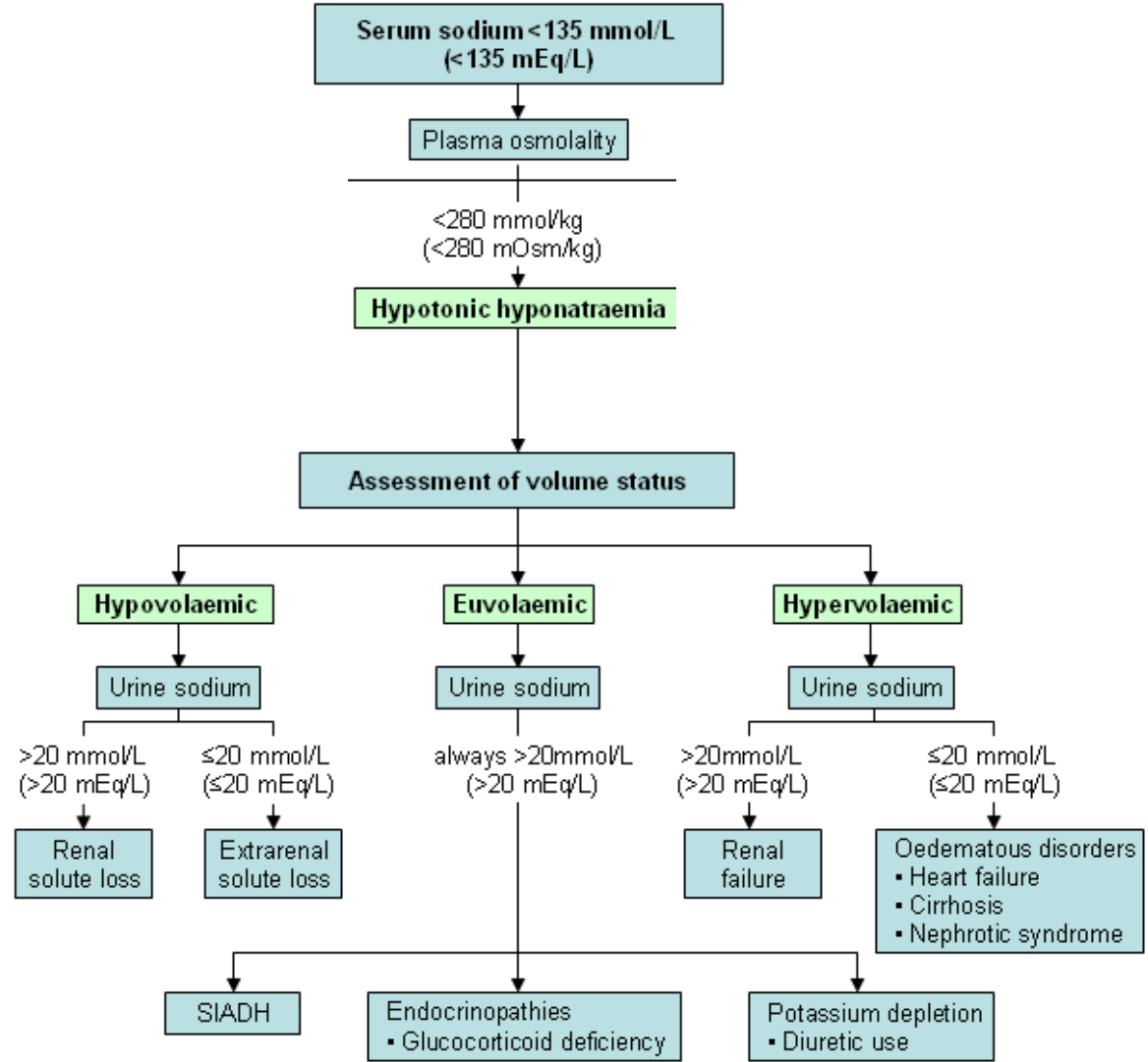
Defining Hyponatremia

- Serum Na <135meq/L or <133meq/L at MSK
 - Symptomatic vs. Asymptomatic
 - Acute (<48hrs) vs. Chronic (>48hrs)



Evaluation

- Volume status
- Urine studies
 - Na
 - Osmolality



Swimchiefs. (2014, July 15). *Hyponatremia-algorithm*. Internal Medicine Residency Program. Retrieved December 6, 2022, from <https://swimed.org/hyponatremia-algorithm/>



Common Causes

Hypovolemic (urine Na <20)

- Diarrhea
- Emesis
- decreased PO intake
- salt-wasting nephropathy
- Diuretic use
- All of these lead to loss of solute, especially sodium

Hypervolemic (urine Na <20)

- Decreased effective circulatory volume (ECV) due to decreased CO and vasodilation respectively
- Decreased ECV \rightarrow Activation of the renin-angiotensin-aldosterone system
- Decompensated heart failure, advanced liver cirrhosis, renal failure



Common Causes Cont.: Euvolemic

- Endocrinopathies

- Adrenal
- Pituitary
- Thyroid



- Tumors
- Radiation
- immunotherapy



Impaired
free water
excretion

- Syndrome of Inappropriate **A**ntidiuretic **H**ormone (SIADH)

- Most cases are associated with tumors
 - Most commonly pulmonary or CNS disease
- Nausea without vomiting
- Pain
- Medications
 - NSAIDs
 - Neuro/psych medications



Approach to treatment- A Balancing Act

- More Salt w/ water
 - Isotonic IVF
 - Increasing dietary intake: salty foods/soups, electrolyte rich fluids
- Less water, more salt
 - Fluid restriction
 - Loop diuretics
 - Salt tabs
 - Hypertonic saline
- Less water
 - Fluid restriction
 - Loop diuretics
 - Vaptans



Takeaways

- Balancing act and “Water issue”
- Hyper/hypo osmolar
- Symptomatic/asymptomatic
- Acute/chronic
- Volume status
- Urine Na and osm
- **AVOID** overcorrection



Thank you!



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