



I. FLUID OVERLOAD

Hurst Review's Step by Step Approach to NCLEX® Success

A. Fluid Volume Excess/Hypervolemia:

- Define: Too much fluid in the _____.

1. Causes:

a. **Heart Failure (HF):** Heart is _____, Cardiac Output _____, Kidney perfusion _____, Urinary Output _____.

*The volume stays in the _____.

b. **Renal Failure (RF):** Kidneys aren't _____.

c. Three things with a lot of sodium:



1) Effervescent soluble medications

2) Canned/processed foods



3) IVF with sodium

2. Hormonal Regulation of Fluid Volume:



a. Aldosterone (steroid, mineralocorticoid):

- Where is aldosterone found? _____

- Normal action: When blood volume gets low (vomiting, hemorrhage, etc.)

→Aldosterone secretion increases → retain sodium/water

→blood volume goes _____.

**Diseases with too much aldosterone:

**Disease with too little aldosterone:

b. Anti-diuretic Hormone (ADH):

- Normally makes you retain or diurese? _____

- Retain _____

TWO ADH PROBLEMS	
Too Much ADH	Not Enough ADH
Retain _____	Lose (diurese) _____
Fluid Volume _____	Fluid Volume _____
SIADH	DI _____
Syndrome of Inappropriate ADH Secretion	Diabetes Insipidus
(TOO MANY _____, TOO MUCH _____)	
Urine _____	Urine _____
Blood _____	Blood _____

*Concentrated makes the #s go up

*Dilute makes the #s go down



Urine specific gravity, sodium, and hematocrit

- ADH is found in the _____.
- Key words to make you think potential ADH problem: craniotomy, head injury, sinus surgery, transsphenoidal hypophysectomy, or any condition that can lead to an increased ICP can lead to an ADH problem.
- Trans-_____, sphenoid _____, hypophysis _____, ectomy _____



*Another name for anti-diuretic hormone (ADH) is vasopressin (Pitressin®). The drug vasopressin (Pitressin®) or desmopressin acetate (DDAVP®) may be utilized as an ADH replacement in diabetes insipidus.

3. Signs/Symptoms of FVE:

a. Distended neck veins/peripheral veins: Vessels are _____.

b. Peripheral edema/third spacing: Vessels can't hold any more, so they start to _____.

Rx

c. Central Venous Pressure (CVP): measured where? _____; number goes ___ in FVE.
More _____ More _____

CVP NORMAL:

2-6 mmHg
5-10 cmH₂O
Depending on measuring device used

d. Lungs sound: _____

e. Polyuria: Kidneys are trying to help you _____.

f. Pulse: _____

- Your heart only wants fluid to go _____.
- If the fluid doesn't go forward, it's going to go _____ into the lungs. Can lead to heart failure and then pulmonary edema.
- Palpate vein or artery? _____
- Feels _____ and _____

g. BP: _____; more volume, more _____.

h. Weight: _____. Any acute gain or loss isn't fat; it's fluid.

4. Treatment:

a. Low sodium diet/ restrict fluids

b. I & O and Daily _____

Rx

c. Diuretics:

Rx

- Loop: Example: _____

Bumetanide (Bumex[®]) may be given when furosemide (Lasix[®]) doesn't work.

Rx

- hydrochlorothiazide (Thiazide[®]): Watch lab work with all diuretics for dehydration and electrolyte problems.

Rx

- Potassium sparing: Example: _____

TESTING STRATEGY

Fluid Retention:
Think Heart Problems FIRST

- d. Bed rest induces _____
by the release of _____, and ↓ production of _____.
- e. Physical assessment
- Focus on the pertinent signs and symptoms.
- f. Give IVFs slowly to the elderly and very _____,
and clients with a history of _____ or _____ problems.

Rx

**TESTING
STRATEGY**

Anytime you see **assessment or evaluation** on the NCLEX®, you should be looking for the presence or absence of the pertinent signs and symptoms.