

Fluid, Electrolyte, and Acid-Base Balance: Water Homeostasis

1. On average, how many liters of water does the human body contain?
2. List two methods of water intake:
 - a.
 - b.
3. List three methods of water output:
 - a.
 - b.
 - c.
4. What is the major way our bodies regular water loss?
5. What are the three processes occurring in the kidneys?
 - a.
 - b.
 - c.
6. What are the four primary mechanisms to regulate fluid homeostasis?
 - a.
 - b.
 - c.
 - d.
7. Answer the following questions on antidiuretic hormone (ADH):
 - a. What is the major stimulus? _____
 - b. What is the direct effect of the hormone? _____
 - c. What portion of the kidney's nephrons are targeted by ADH? _____ -
 - d. What effect will this have on urine volume? _____

8. List three ways dehydration leads to increased thirst:

- a.
- b.
- c.

9. Answer the following questions on the Renin-Angiotensin-Aldosterone System.

a. What enzyme is released from the kidney in response to decreased

blood pressure? _____

b. What enzyme converts angiotensin I to angiotensin II? _____

c. What are two effects of angiotensin II?

1.

2.

d. Which ion does aldosterone cause to be reabsorbed in the proximal convoluted tubules of the kidneys?

e. As a result, what happens to blood volume and blood pressure? _____