

Name : _____

Date: _____

Excretion and the Urinary System : Review #3

Excretory System : (Learning Outcomes O4-O5) - Read pp. 310 -313

L.O. O – 4 ADH and Aldosterone Source Glands

- ___ 1. When someone takes a Diuretic, what effect will it have on the amount of urine they excrete?
- ___ 2. What would an Anti-Diuretic do?
- ___ 3. What is ADH's full name and where is it produced in the body?
- ___ 4. What main hormone causes the cells of the Distal Convolved Tubule to increase their Sodium (Na+) reabsorption?
- ___ 5. Where is this Hormone produced?

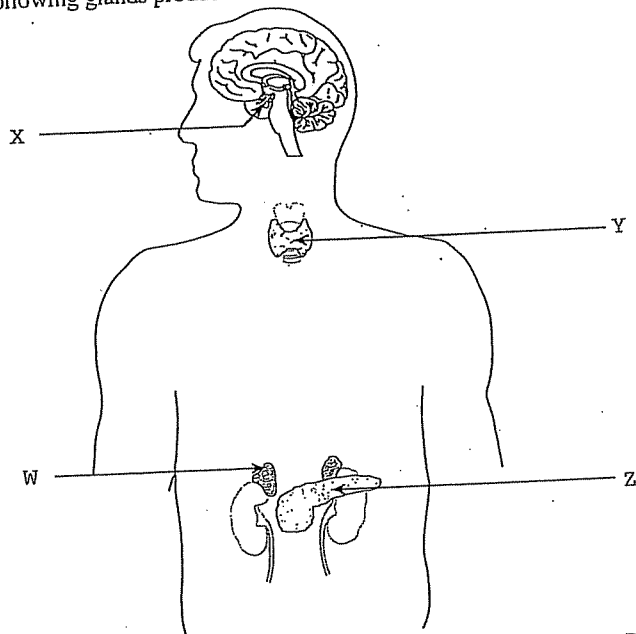
L.O. O – 5 ADH, Aldosterone, and other Hormones and Nephron Functions

- ___ 1. What does ADH actually do to nephron cells in order to increase H₂O reabsorption, and which part of a nephron is mostly targeted by ADH?
- ___ 2. Why does alcohol consumption lead to dehydration → hangover?
- ___ 3. When ADH is secreted in higher levels, what affect will it have on your Blood Volume and therefore your Blood Pressure.
- ___ 4. When Aldosterone levels increase, what will happen to Blood Volume and Blood Pressure?
- ___ 5. What is the Juxtaglomerular Apparatus, and what does it release?
- ___ 6. Under what circumstances does the Juxtaglomerular Apparatus release its hormone?
- ___ 7. What affect does RENIN have on the body?
- ___ 8. What does ANH stand for?
- ___ 9. Where is ANH released from?
- ___ 10. What does ANH inhibit, and what affect would this have on your Blood Volume and therefore your blood pressure?
- ___ 11. When blood is becoming too ACIDIC which substances should be excreted, and which substances should be reabsorbed?
- ___ 12. Describe what a Nephron should do when blood is becoming too BASIC?

PRACTICE QUIZ :

1. Which of the following structures would have cells with the greatest concentration of mitochondria in their cytoplasm?
 - A. glomerulus
 - B. collecting duct
 - C. Bowman's capsule
 - D. proximal convoluted tubule
2. If the blood becomes acidic, the kidneys will maintain homeostasis by actively excreting:
 - A. penicillin.
 - B. histamine.
 - C. calcium ions.
 - D. hydrogen ions.
3. After prolonged sweating and little water intake, your body is likely to respond by:
 - A. increasing urination.
 - B. decreasing water reabsorption in the collecting duct.
 - C. increasing release of ADH (anti-diuretic hormone).
 - D. decreasing release of ADH (anti-diuretic hormone).

4 Which of the following glands produces aldosterone?

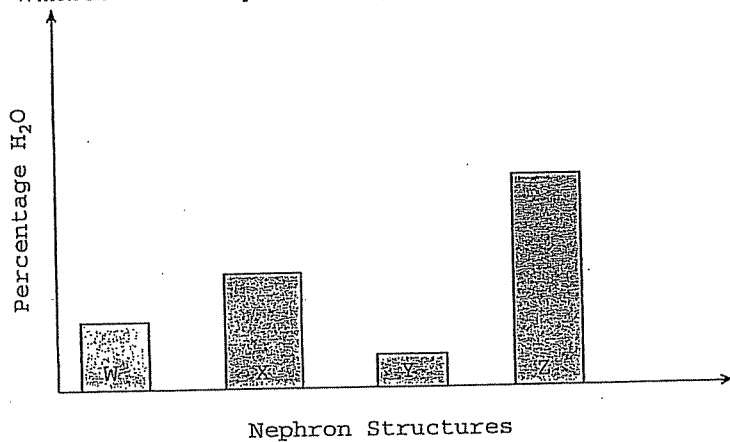


- A. W B. X C. Y D. Z

5 An increase in the amount of circulating ADH will lead to:

- A. a decrease in the volume of urine produced.
- B. an increase in the volume of urine produced.
- C. a decrease in the amount of sodium reabsorbed.
- D. an increase in the amount of sodium reabsorbed.

6 The graph above shows the percentages of H₂O in the filtrate within various structures of the nephron. Which structure is likely the collecting duct?



- A. W B. X C. Y D. Z

7. When blood volume increases beyond normal levels, the release of hormone H is inhibited. As a result, the reabsorption of water decreases. Hormone H is

- A. insulin.
- B. thyroxin.
- C. aldosterone.
- D. antidiuretic hormone (ADH).

8 The tonicity of the tissue surrounding the loop of Henle is vital to the maintenance of blood volume because it

- A. adjusts the pH of the urine.
- B. filters the blood going back to the heart.
- C. moves water from the urine back into the blood.
- D. moves glucose from the urine back into the blood.

9 If a drop in the pH of the blood occurs, the kidneys will

- A. increase the absorption of urea.
- B. decrease the absorption of sodium ions.
- C. decrease the secretion of hydrogen ions.
- D. increase the reabsorption of bicarbonate ions.

10 Which of the following structures responds to low sodium levels in the blood?
 A. liver B. thyroid C. adrenal D. pancreas

11. Which of the following would cause the kidney to produce a more concentrated urine?
 A. Increased blood volume.
 B. Increased alcohol intake.
 C. Decreased blood pressure.
 D. Decreased ADH secretion.

