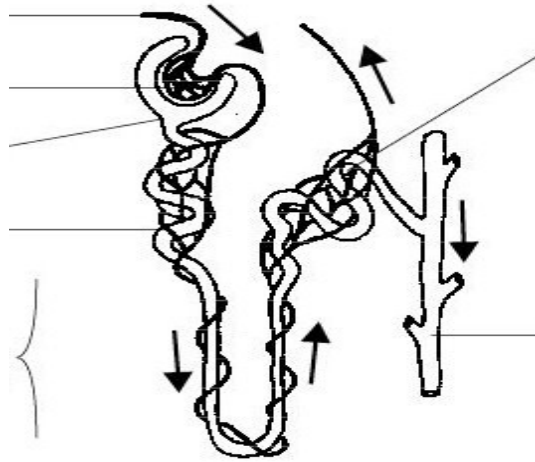


Grand Rounds
Fourth Quarter 2009

LABEL

- A. Bowman's Capsule
- B. Loop of Henle
- C. Glomerulus
- D. Renal Artery
- E. Convoluted tubule (2 lines)



1. Name 4 vital functions performed by the urinary system.

2. Define:

- a. Nephrons –
- b. Bowman's Capsule –
- c. Loop of Henle –

- d. Calculi –
 - e. Hematuria –
 - f. Hypernatremia –
-
3. How much blood, on average, does a healthy individual have flow through the kidneys each minute?
 4. What are the two main parts of a nephron?
 5. Where does urine get filtered?
 6. What is the renal tubule responsible for doing?
 7. Damage to which part of the nephron would interfere with blood pressure?
 8. What do the hormones aldosterone and ADH do?
 9. What are some causes of acute renal failure?

10. Where might a patient with pyelonephritis, inflammation associated with kidney infection, have pain?

11. Which patients are at higher risk for significant kidney problems?

12. What are some complications of dialysis?

Scenarios:

You are called to the scene of a 39 year old male complaining of acute lower back pain as well as shoulder pain. Upon arrival to the scene you find the patient pacing while holding his right side. You also observe that as he paces he seems to feel better than when he sits. He is pale, slightly diaphoretic, anxious and slightly hypertensive.

What is your differential diagnosis at this point?

How will you treat this patient?

You are called to the scene of a local gym. Your patient is a 22 year old male that was climbing a rock wall while in a harness. He fell from 30 feet and the safety rope did not catch until just prior to the ground, this jerked him to a sudden stop without collision with the ground.

The patient is complaining of excruciating back pain specifically to the left lower back. He did not lose consciousness. You do note that he is becoming slightly hypotensive and altered.

What type of trauma should you suspect, specifically?

How will you treat this patient?