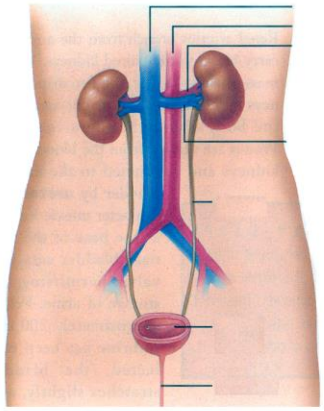
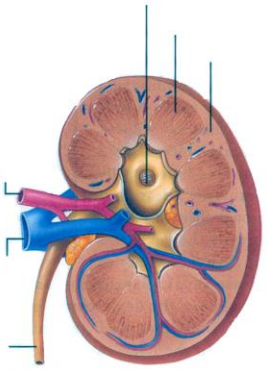
Kidney Review Questions





1. What fraction of blood that flows through our system is "filtered out" by the kidney becoming waste (urine)?
2. What percentage of the water that flows into a nephron gets reabsorbed into the blood?
3. How many ml of water must you drink in 1 day to replenish the water lost to urine?
4. What is the difference between an excretion and a secretion? Give examples of each.
5. List 2 materials that are continuously being excreted be cells. Explain why each of the two are being excreted.
6. Which organ is responsible for detoxifying the blood of toxic byproducts of cellular metabolism?
7. What is removed from excess protein and what is produced when amino acids are deaminated?
8. Why does the liver chemically alter ammonia?
9. What does the liver add to ammonia and what is produced?
10. Explain how the process of "elimination" is different than the processes of excretion and secretion.
11. Provide 4 examples of eliminated material and include from what structure they are eliminated.
12. What is a nephron?
13. In your own words, explain each of the 3 stages of the action of a nephron. Be able to write an essay on this topic.
14. What is ADH?
15. What happens to the urine if ADH production is decreased?
16. What happens to the urine if ADH production is increased?
17. Give 3 reasons why your body may become dehydrated.
18. Draw a flow chart representing the pathway for ADH control.
19. If you ate 6 candy bars would there be sugar in your urine? Explain.
20. If you drank three liters of water would you expect more water in your urine? Why or why not?
21. The human body does not excrete iron obtained from the breakdown of red blood cells. Suggest what the iron is used for?
22. A kangaroo rat is adapted to live in very dry desert environments and can go its entire life without drinking water. It seems to get the little moisture it requires from the food it eats. However a kangaroo rat would die on a diet of only soybeans (mainly protein). Why?

Label the following on the diagram below.(loop of Henle, glomerulus, distal tube, capillary net, Bowman's capsule, renal artery, collecting duct, renal vein, proximal tube