

1. Every day we take in water and lose water. Describe three forms of water intake, four forms of water output, and describe what can cause these forms to vary from day to day.
My answer: Obtain: liquids, food, metabolism | Lose: urin, respired, sweat, feces | About 2500 ml of water is moved per day. This is highly dependent on how much water an organism needs, how much water is available, amount of exercise (if they even exercised at all), how much food is consumed, where they live. There are a lot of factors that can change the intake and outtake of water.
2. Describe how the kidneys "clean" the blood plasma and produce urine. Include basic nephron structure and how that nephron structure relates to the processes of filtration, reabsorption, and secretion.
My answer: Nephron: filtering units of blood plasma to create urine. | The capillaries, where the blood plasma is, need to be filtered that come together into a group called the glomerulus. Then filtered out of the plasma are substances that travel down tubules. At the bottom is a drop of urine, ducts that get larger and leads to ureters | Filtration: nephron tries to filter out as many of the small particles as it can, water, salt, urea, vitamins. Basically taking as much stuff out of the plasma | Reabsorption: reabsorb the filtered stuff into the capillaries, things that the body wants to keep. It knows because of concentration gradients | Secretion: urine like excess salt, excess water, urea, other waste, stuff that body doesn't want
3. Explain what typically causes a urinary tract infection (UTI) and why females typically get this infections at a higher frequency than males.
My answer: Urinary Tract Infection (UTIs): Bacteria infection in the ureter entered by urethral opening and moving up towards the kidneys. Often from fecal material. More frequent in women because of anatomical differences as the urethra and rectum exits are very close.
4. Describe four potentially life-threatening things that can occur to the body if an individual "binge drinks" multiple alcoholic beverages in a row and develops alcohol poisoning.
My answer: Alcohol suppresses the nervous system which affects breathing, heartbeat, and even gag reflex. Losing consciousness still means that alcohol is circulating through a person's system. They could suffer from lack of oxygen and hypothermia, low body temperature, leading to cardiac arrest. They could choke on their own vomit. Irregular heartbeat means that it could also stop. The digestive system can be damaged with irritation leading to gastric ulcers.