

<b>CHAPTER 9</b>	<b>Glomerular Filtration Answer Key</b>	<b>BLM 9.2.1A</b>
<b>ANSWER KEY</b>		

1. Particles diffuse through a membrane because they are more concentrated on one side and therefore collide with the pores in the membrane more frequently on that side. The rate and direction of diffusion depend upon the concentration of the particles on either side of a membrane. In the glomerulus, blood pressure forces all the particles through the membrane in one direction, creating filtrate in which particles are in the same concentration as in blood plasma. Bulk flow can be compared to the movement of water and floating particles in a river flowing downhill.
2. Both nephric filtrate and interstitial fluid are formed as blood pressure forces some water and small solutes from blood plasma through pores in a capillary bed.
3. When blood pressure drops drastically, blood flow is greatly decreased and filtration stops. Urine is not formed. Cells in the kidney may die from the lack of oxygen and nutrients normally supplied by blood flow. Permanent kidney damage is possible. Victims of serious drug overdose sometimes require dialysis or kidney transplant.
4. Blood cells and large plasma protein molecules are too large to be forced through the pores in the glomerulus.
5. Glucose (useful) and urea (a waste) are both found in the filtrate because they are small enough to be forced through the pores in the glomerulus.
6. The urine would be bloody, since red blood cells are not reabsorbed if they enter the nephron.