

## The Cardiovascular System: Measuring Blood Pressure

1. Blood flow is generated by the \_\_\_\_\_. Blood pressure results when that flow encounters \_\_\_\_\_ from the vessel walls.
2. Blood pressure is expressed in \_\_\_\_\_ of mercury and is written as \_\_\_\_\_.
3. Blood flows in layers within the lumen of blood vessels with the layers in the middle of the lumen flowing fastest. This is known as \_\_\_\_\_ flow.
4. Blood pressure fluctuates with each heartbeat. The pulse you feel in your wrist is a \_\_\_\_\_ created by the contracting heart ejecting blood.
5. The maximum pressure exerted by blood against the artery wall is known as \_\_\_\_\_ pressure (SP) and is the result of ventricular \_\_\_\_\_.  
Normal SP is about \_\_\_\_\_ mmHg.
6. What does the dicrotic notch represent?  
\_\_\_\_\_
7. \_\_\_\_\_ pressure (DP) is the lowest pressure in the artery and is a result of ventricular \_\_\_\_\_.  
Normal DP is about \_\_\_\_\_ mmHg.
8. Pulse pressure (PP) is the difference between \_\_\_\_\_ pressure and \_\_\_\_\_ pressure.  
Write the equation for pulse pressure:  $PP = \underline{\hspace{2cm}}$
9. Mean arterial pressure (MAP) is the calculated average pressure in the arteries. It is closer to the diastolic pressure because the heart spends more time in \_\_\_\_\_.  
Write the equation for mean arterial pressure:  $MAP = \underline{\hspace{2cm}}$
10. When taking blood pressure, inflate the cuff so that blood flow is \_\_\_\_\_ in the blood vessel.

Open the valve slowly, releasing the pressure. The first sound you hear through the stethoscope is recorded as the \_\_\_\_\_ pressure. The sounds you hear are due to the \_\_\_\_\_ of the blood.

When you don't hear any sounds, this is recorded as the \_\_\_\_\_ pressure.

For questions 11 and 12, calculate PP and MAP, given  $SP = 130$  mmHg and  $DP = 70$  mmHg (see Quiz section for an example).

11. PP = \_\_\_\_\_

12. MAP = \_\_\_\_\_