

What is Blood Pressure?

Worksheet

Blood pressure is the pressure of circulating blood on artery walls, expressed as systolic/diastolic in mmHg - a normal reading is around 120/80 mmHg.

$$P = CO \times TPR$$

Questions

1. A reading of 120/80 mmHg - what does 80 represent?

- A) Heart rate
- B) Systolic pressure
- C) Diastolic pressure
- D) Pulse pressure

2. Calculate MAP for a blood pressure of 130/85 mmHg.

- A) 85 mmHg
- B) 93.3 mmHg
- C) 100 mmHg
- D) 130 mmHg

3. Which blood pressure category is 135/85 mmHg?

- A) Normal
- B) Elevated
- C) Stage 1 hypertension
- D) Stage 2 hypertension

4. What is pulse pressure?

- A) SBP + DBP
- B) SBP DBP
- C) SBP / DBP
- D) SBP / DBP

5. A person has a blood pressure of 120/80 mmHg. Find their mean arterial pressure (MAP).

6. A patient's blood pressure is 140/90 mmHg. Calculate the MAP.

7. A person's blood pressure is 100/60 mmHg. What is their MAP?

8. Define: What do the two blood pressure numbers mean?

9. Define: What is a normal blood pressure reading?

10. Define: What is Mean Arterial Pressure (MAP)?

Answer Key

1. C) Diastolic pressure - 80 is the diastolic pressure - arterial pressure between heartbeats.
2. C) $100 \text{ mmHg} - \text{MAP} = \text{DBP} + (\text{SBP} - \text{DBP})/3 = 85 + 45/3 = 85 + 15 = 100 \text{ mmHg}$.
3. C) Stage 1 hypertension - Systolic 130-139 or diastolic 80-89 mmHg is classified as Stage 1 hypertension.
4. B) SBP - DBP - Pulse pressure is the difference between systolic and diastolic pressure, reflecting arterial stiffness.
5. $\text{MAP} = \text{DBP} + (\text{SBP} - \text{DBP})/3 = 80 + (120 - 80)/3 = 80 + 13.3 = 93.3 \text{ mmHg}$
6. $\text{MAP} = 90 + (140 - 90)/3 = 90 + 16.7 = 106.7 \text{ mmHg}$
7. $\text{MAP} = 60 + (100 - 60)/3 = 60 + 13.3 = 73.3 \text{ mmHg}$
8. Systolic (top) = pressure during a heartbeat; diastolic (bottom) = pressure between heartbeats.
9. Around 120/80 mmHg for a healthy adult at rest.
10. The average pressure in the arteries during one cardiac cycle: $\text{MAP} = \text{DBP} + (\text{SBP} - \text{DBP})/3$.

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