

# [The cardiovascular system: blood pressure regulation essay sample](https://assignbuster.com/the-cardiovascular-system-blood-pressure-regulation-essay-sample/)

1. a. Short term mechanisms for regulating blood pressure include regulating what three things?
1. Vessel diameter
2. Contractibility
3. Heart Rate
b. Long term mechanisms will regulate \_\_\_\_blood volume\_\_\_\_\_\_\_. 2. Two major arterial baroreceptors are located where?
a. Carotid Sinus
b. Aortic Arch
3. Using up and down arrows, show the effect of increased blood pressure (BP) on the impulses sent to the brain, the effect on the parasympathetic (PNS) and sympathetic (SNS) nervous systems and the resulting change in blood pressure.

BP  \_\_\_\_ impulses \_\_\_\_ PNS and \_\_ \_\_ SNS  \_\_ \_\_ BP 4. As a result of these changes in the PNS and SNS, list two effects on the heart and one on blood vessels.
Heart: Decreases cardiac output and decreases heart rate.

Blood vessels: Vasodilation.

5. Similar to question 3, show the effect of decreasing blood pressure.
BP  \_ \_ impulses  \_\_ \_\_ PNS and \_\_\_\_\_ SNS  \_\_\_\_\_ BP 6. In addition to effects on the heart and blood vessels, what hormones were released from the adrenal gland? \_\_Epinephrine\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_norepinephrine\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. a. What cells in the kidney monitor low blood pressure? \_\_Juxtaglomerular\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b. What enzyme is released as a result of low blood pressure? \_\_\_Renin\_\_\_\_\_\_\_\_\_\_ c. What does this enzyme act on in the blood? \_\_\_Angiotensinogen\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. Name two effects of Angiotensin II.

a. \_\_\_\_vasoconstriction\_\_\_\_\_
b. \_\_\_\_increase aldosterone release\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. a. The main effect of aldosterone is: \_\_To increase sodium and water reabsorption in the \_\_kidneys. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
b. How does this increase blood volume? \_\_\_An increase in sodium leads to an increase in water which leads to an increase in extracellular fluid and in turn increases blood volume. 10. a. What other hormone will increase water reabsorption from the kidney? \_\_Antidiuretic Hormone\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. What is the major stimulus for this hormone? \_\_An increase in plasma osmolarity is the major stimulus for ADH. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_