

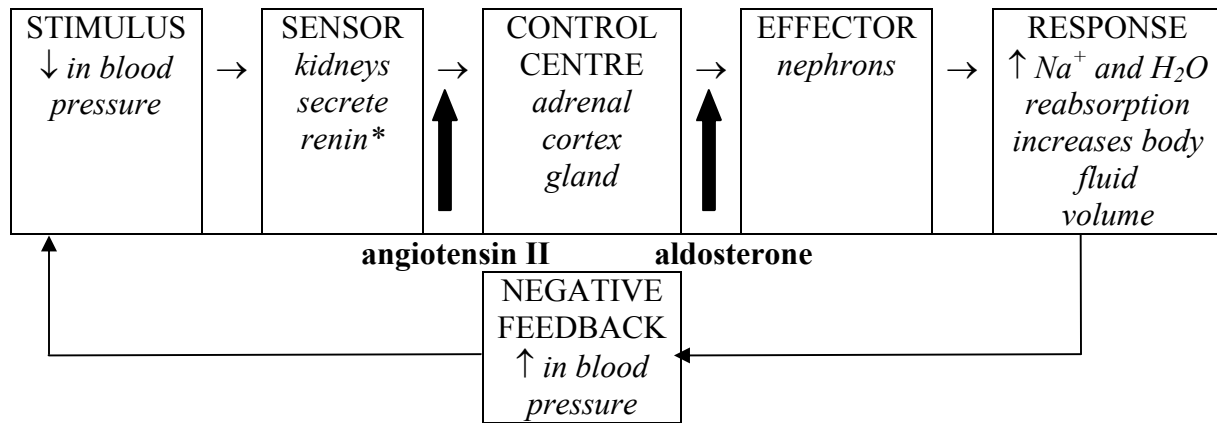
CHAPTER 9
HANDOUT

Regulation of Body Fluid Volume

BLM 9.3.4

When someone suffers a serious extensive blood loss, body fluid volume decreases. The decrease in fluid volume tends to decrease blood pressure, but the homeostatic mechanism presented below helps to maintain blood pressure until blood loss becomes critical and death is imminent.

How aldosterone raises blood pressure



* *renin from the kidneys causes the plasma protein angiotensinogen to change to angiotensin I. An enzyme in the lungs changes angiotensin I into angiotensin II.*

1. Aldosterone stimulates the reabsorption of sodium ions in the nephrons. How does this lead to an increase in water reabsorption?

2. Drinking salty water tends to increase body fluid volume. What effect might this increased volume have on secretion of aldosterone? How might the nephrons respond?
