

Read the passage and answer the following questions)

Blood Pressure Regulators

The body is composed of systems that have evolved and diversified in order to maintain the natural functions and processes they regulate. One such system that has these regulators is the body's cardiovascular system. The body's pump, which regulates the flow of vitally needed oxygen to all cells of the body, as well as the discard of carbon dioxide and other waste products, is the heart.

Because blood pressure varies at different points within the body, differing components are needed to keep the body's blood pressure regulated. Three of the basic components are baroreceptors, chemoreceptors, and the kidneys.

Baroreceptors are stretch receptors composed of fine branching nerve endings and are contained along the walls of the arteries near the heart and in other areas of the body as well. Impulses are related to this stretching along the arterial walls, which causes these baroreceptors to send out even more impulses to the heart, arteries, and veins, causing the blood pressure to go either up or down.

Chemoreceptors are located along the walls of the arteries and monitor changes in oxygen level, carbon dioxide, and pH. Just think! A fall in oxygen causes receptors to send impulses to raise the blood pressure.

The kidneys play a role in regulating blood pressure by absorbing salts and water and removing wastes. Hormones secreted by the adrenal cortex cause the kidney to keep or let go of any salt and water. This has an influence on blood volume and consequently on blood pressure.

Q1. What is the main idea of the passage?

- A. Blood pressure can be treated only by monitoring baroreceptors.
- B. Blood pressure can be treated only by monitoring chemoreceptors.
- C. Blood pressure can be treated only by monitoring the kidneys.
- D. Blood pressure can be regulated through baroreceptors, chemoreceptors, and the kidneys.

Answers: _____

Q2. Which statement is not a detail from the passage?

- A. Baroreceptors are rigid and static nerve endings that are contained along the arterial walls and send out messages along the nerve pathway.
- B. Chemoreceptors are located along the walls of the arteries and monitor changes in oxygen level.

C. The kidneys play a role in regulating blood pressure by absorbing salts and water.

D. The heart is the body's pump, which regulates the flow of vitally needed oxygen to cells of the body.

Answers: _____

Q3. What is the meaning of the word evolved in the first paragraph?

A. To spread

B. To gradually develop

C. To revolve

D. To shift

Answers: _____

Q4. What is the writer's primary purpose in writing this essay?

A. To inform the reader about the dangers of high blood pressure

B. To inform the reader how high blood pressure leads to a higher risk of heart attack

C. To inform the reader how the cardiovascular system regulates blood pressure

D. To persuade the reader that controlling one's blood pressure is important

Answers: _____

Q5. What is the best summary of this passage?

A. The body's pump, the heart, regulates the flow of oxygen to all cells of the body and discards waste products that include carbon dioxide. The kidneys help in this process by absorbing salts and water.

B. There are several systems to maintain the natural functions and processes of the body. One system is the cardiovascular system, which regulates blood pressure through baroreceptors, chemoreceptors, and the kidneys.

C. Baroreceptors help regulate blood pressure and are found along the wall of the arteries. Baroreceptors send out impulses to the heart, arteries, and veins, resulting in the lowering or raising of blood pressure.

D. Chemoreceptors monitor changes in oxygen level that affect blood pressure.

Answers: _____

Q6. What is a major difference in the way baroreceptors and chemoreceptors work from the way the kidneys work?

- A. Baroreceptors and chemoreceptors both work within the wall of the arteries sending out impulses to raise or lower blood pressure, whereas the kidneys help control blood volume.
- B. Baroreceptors and chemoreceptors both work to help maintain blood volume, whereas the kidneys take care of salts, water, and waste removal.
- C. Baroreceptors and chemoreceptors must work together to control blood pressure, whereas the kidneys work with the adrenal cortex.
- D. Baroreceptors and chemoreceptors are both located near the adrenal cortex, whereas the kidneys are located near the heart.

Answers: _____

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