

Circulatory System Worksheet Answer Key PDF

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Part 1: Building a Foundation

What is the primary function of the circulatory system?

undefined. A) Digestion of food

undefined. B) Transportation of nutrients and gases ✓

undefined. C) Production of hormones

undefined. D) Storage of energy

The primary function of the circulatory system is to transport nutrients and gases throughout the body.

Which of the following are components of the cardiovascular system?

undefined. A) Heart ✓

undefined. B) Lungs

undefined. C) Blood vessels ✓

undefined. D) Lymph nodes ✓

The components of the cardiovascular system include the heart, blood vessels, and lymph nodes.

Describe the role of red blood cells in the circulatory system.

Red blood cells are responsible for transporting oxygen from the lungs to the body's tissues and returning carbon dioxide to the lungs.

List the three main types of blood vessels and briefly describe their functions.

1. What are arteries?

Arteries carry oxygen-rich blood away from the heart.

2. What are veins?

Veins carry oxygen-poor blood back to the heart.

3. What are capillaries?

Capillaries facilitate the exchange of nutrients and gases between blood and tissues.

The three main types of blood vessels are arteries (carry blood away from the heart), veins (carry blood to the heart), and capillaries (facilitate exchange of substances).

Part 2: Understanding and Interpretation

Which part of the heart is responsible for pumping oxygen-poor blood to the lungs?

undefined. A) Left atrium

undefined. B) Right atrium

undefined. C) Left ventricle

undefined. D) Right ventricle ✓

The right ventricle is responsible for pumping oxygen-poor blood to the lungs.

Which of the following statements about the lymphatic system are true?

undefined. A) It helps in the absorption of fats from the digestive tract. ✓

undefined. B) It circulates oxygen-rich blood.

undefined. C) It returns interstitial fluid to the bloodstream. ✓

undefined. D) It aids in immune function. ✓

The lymphatic system helps in the absorption of fats, returns interstitial fluid to the bloodstream, and aids in immune function.

Explain how capillaries facilitate the exchange of nutrients and gases between blood and tissues.

Capillaries have thin walls that allow for the diffusion of oxygen, carbon dioxide, nutrients, and waste products between blood and surrounding tissues.

Part 3: Application and Analysis

If a person has a blockage in their coronary arteries, which part of the circulatory system is directly affected?

undefined. A) Brain

undefined. B) Heart ✓

undefined. C) Lungs

undefined. D) Liver

The heart is directly affected by a blockage in the coronary arteries.

In which scenarios would the circulatory system need to increase blood flow?

undefined. A) During exercise ✓

undefined. B) While sleeping

undefined. C) During digestion ✓

undefined. D) In response to injury ✓

The circulatory system needs to increase blood flow during exercise, digestion, and in response to injury.

Describe how the body responds to a decrease in blood pressure and the role of the circulatory system in this process.

The body responds to a decrease in blood pressure by increasing heart rate, constrict blood vessels, and releasing hormones to retain fluid.

Which of the following best explains the relationship between the pulmonary and systemic circulations?

undefined. A) They are two separate systems with no interaction.

undefined. B) Pulmonary circulation oxygenates blood, while systemic circulation delivers it to the body. ✓

undefined. C) Both systems only circulate oxygen-poor blood.

undefined. D) Systemic circulation occurs only in the lower body.

Pulmonary circulation oxygenates blood, while systemic circulation delivers it to the body.

Analyze the following statements and identify which are correct regarding blood pressure.

undefined. A) Blood pressure is higher in arteries than in veins. ✓

undefined. B) Blood pressure remains constant throughout the body.

undefined. C) Blood pressure is influenced by heart rate and blood volume. ✓

undefined. D) Blood pressure is unaffected by physical activity.

Blood pressure is higher in arteries than in veins, influenced by heart rate and blood volume.

Part 4: Evaluation and Creation

Which lifestyle change is most likely to improve circulatory system health?

undefined. A) Increasing salt intake

undefined. B) Regular physical exercise ✓

undefined. C) Smoking

undefined. D) Reducing water consumption

Regular physical exercise is most likely to improve circulatory system health.

Evaluate the following interventions and identify which are effective in managing high blood pressure.

undefined. A) Medication ✓

undefined. B) Stress management ✓

undefined. C) High caffeine intake

undefined. D) Balanced diet ✓

Effective interventions for managing high blood pressure include medication, stress management, and a balanced diet.

Propose a public health campaign aimed at educating teenagers about maintaining a healthy circulatory system. Include key messages and strategies.

A public health campaign could focus on promoting regular exercise, healthy eating, and avoiding smoking to maintain a healthy circulatory system.