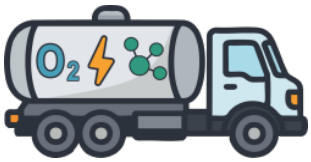
CONCEPT: OVERVIEW OF THE CARDIOVASCULAR SYSTEM

Introduction to Cardiovascular System

- Responsible for maintaining blood circulation throughout the body.
  - Comprised of the _____, blood vessels, and blood.
- Some of the functions of the cardiovascular system:

Nutrient Transport	Protection	Waste Removal
		
• _____ & essential nutrients. • Enzymes & hormones.	• Helps maintain body temperature. • _____ & pathogen invasion.	• CO_2 delivered to _____. • Other waste to liver & kidneys.

EXAMPLE

Which of the following functions is not attributed to the responsibilities of the cardiovascular system?

a) Carrying lactic acid from the muscles to the liver for conversion into glucose.

b) Transporting uric acid from the liver to the kidneys for excretion.

c) Moving insulin from the pancreas to other parts of the body to facilitate metabolism.

d) Delivering salivary amylase to the lumen (hollow part) of the stomach.

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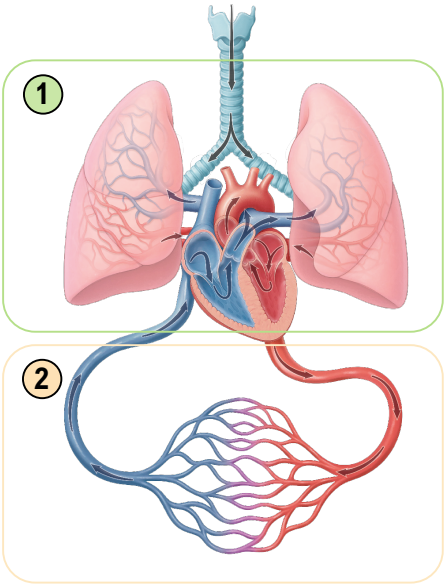
Cardiovascular System Divisions

◆ Cardiovascular System has ____ divisions.

(1) Pulmonary Circuit **(2) Systemic Circuit**



Pulmonary Circuit

- Between heart & lungs.
- Pumps ____-rich blood to lungs.
- Receives ___-rich blood from lungs.

Systemic Circuit

- Between heart & rest of body.
- Pumps ____-rich blood to body.
- Receives ____-rich blood from body.

EXAMPLE

Which of the following correctly describes the functions of the pulmonary and systemic circuits?

a) Pulmonary circuit helps oxygen-rich blood flow through the lungs to the rest of the body.

b) Systemic circuit is only responsible to deliver oxygen-rich blood to major organs of the body.

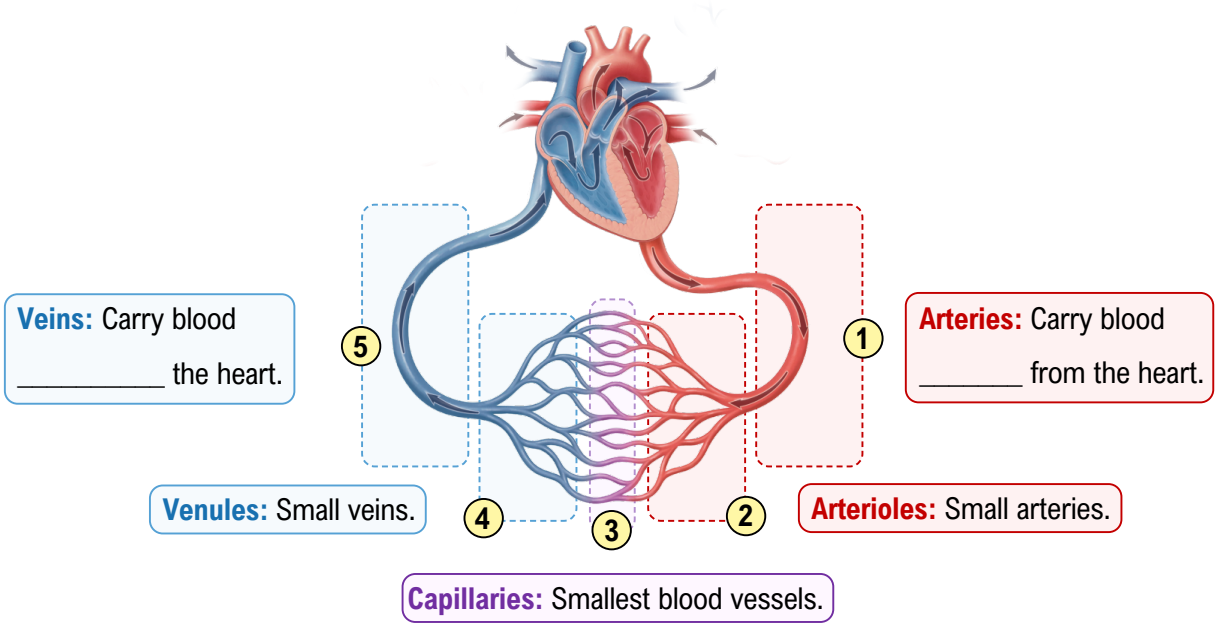
c) Pulmonary circuit transports carbon dioxide-rich blood from the heart to the lungs for gas exchange.

d) Systemic circuit allows oxygen-rich blood to flow through the lungs to other organs and muscles.

CONCEPT: OVERVIEW OF THE CARDIOVASCULAR SYSTEM

Blood Vessels

- Tube-like structures forming a _____ network to transport blood throughout the body.
  - Originate in _____, branch throughout the body, & circulate back to the heart.
- There are ___ types of blood vessels.



EXAMPLE

Hair shafts are composed of dead keratinized cells while hair roots contain living cells which are nourished by blood vessels known as the papilla. What type of blood vessels could papilla be?

a) Venules
b) Arteries
c) Arterioles
d) Veins
e) Capillaries
f) None of these

PRACTICE

Which of the following statements is true?

a) Arteries carry waste from different cells of the body to the excretory organs.
b) Venules are the smallest of all blood vessels and merge into each other to form veins.
c) The branching of arteries into smaller vessels ensures that blood reaches all parts of the body.
d) Arteries originate in the lungs and connect back to the heart as veins after delivering oxygen to the body.