

Circulatory system

The circulatory system supplies oxygen and nutrients to every cell of the body and removes wastes and carbon dioxide. The system consists of blood, which carries the nutrients and wastes; the heart, which pumps the blood; and a closed system of tubes (arteries and veins) that carries the blood to and from the body tissues. The arteries transport blood enriched with oxygen and nutrients; the veins carry depleted blood. The artery that leaves the heart is very large, but it divides again and again into smaller and smaller branches. The finest of these branches are called capillaries, which are only open to one narrow side – so small that blood cells must pass through the single file. The capillaries are the site of the exchange of nutrients and wastes between the blood and the tissue cells. Exchange capillary beds are found throughout the body except in the cartilage, cornea, nails, hair, and the surface of the eye. The depleted blood moves back toward the heart through the venous system. First the finest blood vessels unite in the capillary beds to form venules, then the venules combine again and again until they form the largest veins. The heart pumps the depleted blood to the lungs where carbon dioxide is exchanged for oxygen, and to the liver and kidneys, which remove wastes. Large arteries provide direct "express" service to major areas of the body such as the brain, lungs, arms, and abdomen; these arteries don't begin to subdivide until they reach the appropriate area. Press your finger against one of these arteries and you will feel the pump stroke or beat of the heart. This is the pulse.

Read the text about the circulatory system and answer these questions:

1. What is the function of the circulatory system?
2. What does the circulatory system consist of?
3. What is the function of blood?
4. What is the function of the heart?
5. What is the function of arteries and veins?
6. What kind of blood do veins carry?
7. What kind of blood do arteries carry?
8. How are the finest of the branches called?
9. What happens there?
10. Where are capillaries to be found?
11. Where does the heart pump the depleted blood?
12. What happens there?