

Study Guide: Anatomy & Physiology

Unit 4 (Transport)

Blood Cells

1. What are the three main types of blood cells, and what are their primary functions?
2. In approximately what proportions are these cells found in a typical person's blood?
3. Be able to describe issues that may arise in patients who have elevated or depressed levels of the three main types of blood cells.
4. What is blood plasma, and what does it consist of?

Blood Types

5. What is the ABO blood group?
6. What is the genetic basis of the different ABO blood types?
7. What are antigens and antibodies, and how are they related?
8. What is Rh?
9. Be able to explain why a patient may or may not have issues receiving a blood transfusion, based on their and the donor's blood types.
10. Be able to determine a patient's blood type by analyzing a blood sample.

Cardiovascular Structure

11. Be able to describe the structure of the heart without using a diagram.
12. Be able to label a diagram of the heart.
13. Explain the flow of blood through the heart.
14. What is the difference between an artery and a vein?
15. What are arteries, arterioles, capillaries, venules, and veins?

Cardiovascular Function

16. Explain the flow of blood through the pulmonary and systemic circuits.
17. Describe the cardiac conduction system (electrical impulses) and its relationship to the cardiac cycle (contraction and relaxation of chambers).
18. Be able to analyze an electrocardiogram.
19. What is arrhythmia? What is atrial fibrillation?

Blood Pressure

20. What are systole and diastole? What role do they play in measuring blood pressure?
21. Be able to calculate either the stroke volume, cardiac output, or heart rate of an individual, given two of the three variables.

Structure of the Lymphatic System

22. Why is the lymphatic system considered to be a subdivision of the cardiovascular system?
23. What are the major structures of the lymphatic system? Where are they located?
24. What are the specific functions of each of the lymphatic organs?
25. Describe the pathway of lymph in the body.
26. What is interstitial fluid? What is its purpose?

Function of the Lymphatic System

27. What are the primary functions of the lymphatic system?
28. What are two functions of the lymph nodes?
29. What is the function of the valves in lymph vessels?

The Immune System

30. What are pathogens?
31. What are the three main lines of defense your body has against pathogens?
32. Be able to explain all the different components of each of these lines of defense.
33. What is the difference between T cells and B cells?
34. What are memory cells, and what role do they play in fighting infection?
35. How do vaccines work?
36. What is herd immunity?

Key Vocabulary

erythrocyte	aorta	lymph
leukocyte	septum	lymph node
thrombocyte	vena cava	NK cell
blood plasma	valves	T-cell
antigen	SA node	B-cell
antibody	AV node	innate
agglutination	electrocardiogram	adaptive
atria	arrythmia	immunity
ventricles	systole	vaccine
pulmonary	diastole	