

A Guided Study of the Lymphatic System (Reference Photos, Text and Videos for answers)

1. The Lymphatic System is a network of vessels that carry lymph in one direction away from the heart. True/False
2. What two systems are directly connected to the lymphatic system? Circle all that apply.
 - a) Circulatory & Immune
 - b) Reproductive & Endocrine
 - c) Nervous & Immune
 - d) Immune & Endocrine
3. How many liters of plasma are left behind each day in the interstitial fluid?
 - a) 16
 - b) 20
 - c) 3
 - d) 7
4. Because lymph originally derived from blood plasma, its composition is much the same. True/False
5. Lymphatic vessels contain valves that allow lymphatic fluid to flow in and out of the interstitial fluid (ISF). True/False
6. Lymphatic fluid moves through the body on its own. True/False
7. Cervical lymph nodes are located in which of the following?
 - a) Neck
 - b) Spine
 - c) Armpit
 - d) Groin

8. Inguinal lymph nodes are located in which of the following?
- a) Neck
 - b) Spine
 - c) Armpit
 - d) Groin
9. Axillary lymph nodes are located in which of the following?
- a) Neck
 - b) Spine
 - c) Armpit
 - d) Groin
10. The lumbar trunk receives lymph from the stomach, intestines, pancreas, and spleen. True/False
11. The lumbar trunk drains into the _____.
- a) Cisterna Chyli
 - b) Axillary Lymph Nodes
 - c) Inguinal Lymph Nodes
 - d) Thoracic Lymph Trunk
12. The intestinal trunk receives lymph from the stomach, intestines, pancreas, spleen and liver. True/False
13. The intestinal trunk drains into the _____.
- a) Cisterna Chyli
 - b) Axillary Lymph Nodes
 - c) Inguinal Lymph Nodes
 - d) Thoracic Lymph Trunk
14. Chyle is a milky, bodily fluid consisting of lymph, emulsified fats and/or free fatty acids. True/False
15. The cisterna chyli is the largest lymph vessel of the lymphatic system. True/False

16. Approximately how long is the thoracic duct in an adult?
- 12 ft.
 - 16 in
 - 14 in
 - 10 ft.
17. The following are considered organs of the lymphatic system. Circle all that apply.
- Pancreas, Spleen, and Tonsils
 - Thymus, Tonsils, and Spleen
 - Tonsils, Liver, and Gallbladder
 - Spleen, Appendix, and Liver
18. Tonsils filter and protect the body from pathogens that may enter the oral and nasal cavity, by forming a protective barrier of tissue around the pharynx. True/False
19. Which lymphatic organ holds a reserve of blood in case of hemorrhagic shock?
- Spleen
 - Pancreas
 - Liver
 - Thymus
20. If the spleen is removed, the gallbladder and pancreas take on many functions of the spleen. True/False
21. Which lymphatic organ atrophies as a person ages?
- Gallbladder
 - Thymus
 - Pancreas
 - Spleen

22. Lymph vessels are found in the lining of what to transport fats to the blood circulation?
- a) Respiratory Tract
 - b) Gastrointestinal Tract
 - c) Urinary Tract
 - d) Reproductive Tract
23. Lymphadenopathy occurs when one or more lymph nodes become enlarged and are reactive in response to infection or inflammation. True/False
24. Lymphedema occurs when damaged or a deformed lymphatic system accumulates too much lymph and starts to swell. True/False
25. Lymphangiomas are cancer of the lymphatic system and can be either primary or secondary. True/False
26. Lymphoma is a disease involving multiple cysts or lesions formed from lymphatic vessels. It is a malformation of congenital errors of lymphatic development that occurs before the 20th week of gestation. True/False

A Guided Study of the Immune System

(Reference text, photos, and videos for answers)

1. The immune system is our first defense against pathogens and unsterile environments. True/False
2. Name the two sub-systems of the immune system.
 - a) Innate & Adaptive/Acquired
 - b) Physical & Chemical Barriers
 - c) Active & Passive
 - d) White Blood Cells & Red Blood Cells
3. Plasma accounts for what percentage of the body's blood?
 - a) 45%
 - b) 55%
 - c) > 1 %
 - d) 8 %
4. Red blood cells are also known as what?
 - a) Erythrocytes
 - b) Platelets
 - c) Leukocytes
 - d) Granulocytes
5. Platelets help in preventing the loss of blood. True/False
6. Leukocytes are white blood cells. True/False
7. Name the most common type of white blood cell.
 - a) Neutrophils
 - b) Basophil
 - c) Monocytes
 - d) Eosinophils

8. Which types of white blood cells have a bi-lobed nucleus? Circle all that apply.
 - a) Neutrophils
 - b) Basophils
 - c) Eosinophils
 - d) Lymphocytes

9. A high monocyte count is a good sign. True/False

10. T cells originate and mature in the thymus. True/False

11. Skin, unbroken mucous membranes, respiratory tract, gastrointestinal tract, reproductive tract, and urinary tract would be considered physical barriers of the Immune System. True/False

12. Sweat, saliva, tears, stomach acids, urine, vaginal secretions, and oils on skin and hair would all be considered chemical barriers of the Immune System. True/False

13. Oils contain anti-microbial fatty acids that protect pathogens from growing. True/False

14. Inflammation is part of the adaptive/acquired immune system. True/False

15. Complement immunity is a physical barrier in the innate immune system. True/False

16. Identify the part of immunity that deals with preventing viruses.
 - a) Adaptive/Acquired Immune System
 - b) Interferons
 - c) Lymphocytes
 - d) Chemical Barriers

17. The five classes of antibodies are IgA, IgB, IgC, IgD, IgE. True/False

18. A killed or weakened pathogen or its components is known as what?

- a) Vaccine
- b) Macrophage
- c) Phagocytosis
- d) Virus

19. Hormones have no impact on the immune system. True/False