

Chapter 20

Use with Section 3

ENRICHMENT**● Your Lymphatic System****Designing a System**

The lymphatic system is sometimes compared to the circulatory system. However, the lymphatic system has no pump, like the heart, to keep lymph circulating through the body. In addition, the circulatory system is a continuous system—the lymphatic system is not. In the circulatory system, arteries leaving the heart connect to smaller and smaller arteries that connect to capillaries. The capillaries connect to small veins that connect to larger and larger veins. The large veins lead back to the heart, where the circuit is complete. In the lymphatic system, although lymph capillaries lead to larger lymph vessels, the lymph capillaries begin “blindly” in the tissues. The lymph does not go in a complete circuit through the body.

Part A

Compared to the circulatory system, do you think that the lymphatic system is well-adapted to carrying material through the body? Explain your answer. _____

Part B

Design a lymphatic system for an imaginary species of the future. Draw a picture of the system and explain how it compares to the human lymphatic system.