

LABORATORY EXERCISE 48

LYMPHATIC SYSTEM

MATERIALS NEEDED

textbook
human torso
anatomical chart of the lymphatic system
compound microscope
prepared microscope slides:
 lymph node section
 human thymus section
 human spleen section

The lymphatic system is closely associated with the cardiovascular system and includes a network of capillaries and vessels that assist in the circulation of body fluids. These lymphatic capillaries and vessels provide pathways through which excess fluid can be transported away from intercellular spaces within tissues and returned to the bloodstream.

The organs of the lymphatic system also help to protect the tissues against infections by filtering particles from lymph and by supporting the activities of lymphocytes that furnish immunity against specific disease-causing agents.

PURPOSE OF THE EXERCISE

To review the structure of the lymphatic system and to observe the microscopic structure of a lymph node, thymus, and spleen.

LEARNING OBJECTIVES

After completing this exercise, you should be able to

1. locate and identify the major lymphatic pathways in an anatomical chart or model;
2. locate and identify the major chains of lymph nodes in an anatomical chart or model;
3. describe the structure of a lymph node;
4. identify the major microscopic structures of a lymph node, thymus, and spleen.

PROCEDURE A—
LYMPHATIC PATHWAYS

1. Review a textbook section on *lymphatic pathways*.

2. As a review activity, label figure 48.1.
3. Complete Part A of Laboratory Report 48.
4. Observe the human torso and the anatomical chart of the lymphatic system and locate the following features:

lymphatic vessels

lymph nodes

lymphatic trunks

 lumbar trunk

 intestinal trunk

 intercostal trunk

 bronchomediastinal trunk

 subclavian trunk

 jugular trunk

collecting ducts

 thoracic (left lymphatic) duct

 right lymphatic duct

internal jugular veins

subclavian veins

PROCEDURE B—LYMPH NODES

1. Review a textbook section on *lymph nodes*.
2. As a review activity, label figure 48.2.
3. Complete Part B of the laboratory report.
4. Observe the anatomical chart of the lymphatic system and the human torso, and locate the clusters of lymph nodes in the following regions:

cervical region

axillary region

inguinal region

pelvic cavity

abdominal cavity

thoracic cavity

Lab Report 48 Lymphatic System Anatomy

Kevin T Patton, PhD



Lab Report 48 Lymphatic System Anatomy:

Lab Report 48 Lymphatic System Anatomy Book Review: Unveiling the Power of Words

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