

Structure of the Heart

Laboratory Exercise 41

Background

The heart is a muscular pump located within the mediastinum and rests upon the diaphragm. It is enclosed by the lungs, thoracic vertebrae, and sternum. Attached at its top (the base) are several large blood vessels. Its distal end extends downward to the left and terminates as a bluntly pointed apex.

The heart and the proximal ends of the attached blood vessels are enclosed by a double-layered pericardium. The inner layer of this membrane (visceral pericardium) consists of a thin covering that is closely applied to the surface of the heart, whereas the outer layer (parietal pericardium with fibrous pericardium) forms a tough, protective sac surrounding the heart.

Materials Needed

Textbook
Dissectible human heart model
Fresh pig heart
Dissecting tray
Dissecting instruments
Disposable gloves



Purpose of the Exercise

Review the structural characteristics of the human heart and examine the major features of a mammalian (pig) heart.

Procedure A – The Human Heart

1. Label figures 41.1, 41.2, and 41.3.
2. Examine the heart model and locate the following features: heart, epicardium, myocardium, endocardium, atria, ventricles, A-V valves, chordae tendineae, papillary muscles, superior vena cava, inferior vena cava, pulmonary trunk, pulmonary arteries, pulmonary veins, aorta, semilunar valves.
3. Complete Part A of the laboratory report.

Laboratory Exercise 4structure Of The Heart Part A

Thomas Griffiths



Laboratory Exercise 4structure Of The Heart Part A:

Part - Anatomy & Physiology Laboratory Manual - E-Book Kevin T Patton, PhD, 2014-12-02 Effectively master various physiology dissection identification and anatomic explorations in the laboratory setting with the Anatomy Physiology Laboratory Manual 9th Edition This practical full color lab manual contains 55 different A P lab exercises that cover labeling anatomy identification dissection physiological experiments computerized experiments and more The manual also includes safety tips a comprehensive instruction and preparation guide for the laboratory and tear out worksheets for each of the 55 exercises In addition 8 e Lab modules offer authentic 3D lab experiences online for virtual lab instruction 8 interactive eLabs further your laboratory experience in the digital environment Complete list of materials for each exercise offers a thorough checklist for planning and setting up laboratory activities Over 250 illustrations depict proper procedures and common histology slides Step by step guidance for dissection of anatomical models and fresh or preserved specimens with accompanying illustrations helps you become acclimated to the lab environment Physiology experiments centering on functional processes of the human body offer immediate and exciting examples of physiological concepts Easy to evaluate tear out lab reports contain checklists drawing exercises and questions that help you demonstrate your understanding of the labs they have participated in Reader friendly spiral binding allows for hands free viewing in the lab setting Labeling and coloring exercises provide opportunities to identify critical structures examined in the lab and lectures Brief learning aids such as Hints Landmark Characteristics and Safety First are found throughout the manual to help reinforce and apply knowledge of anatomy and function Modern anatomical imaging techniques such as MRIs CTs and ultrasonography are introduced where appropriate Boxed hints and safety tips provide you with special insights on handling specimens using equipment and managing lab activities UPDATED Fresh activities keep the manual current and ensure a strong connection with the new edition of the A P textbook NEW Updated illustrations and design offer a fresh and upbeat look for the full color design and learning objectives NEW Expanded and improved student resources on the Evolve companion website include a new version of the Body Spectrum electronic coloring book **Data Structures in C++ Including Breadth and**

Laboratories Angela B. Shiflet, 1995-09 Data Structures in C Including Breadth and Laboratories integrates laboratory exercises problem solving skills and breadth sections covering non programming aspects of computer science into the study of data structures An appendix on non object oriented features of C helps students from a C background get up to speed and Chapter 4 presents the aspects of OOP in C that students need in studying data structures Other aids to learning include Programming Projects over 1 000 exercises and numerous figures Laboratory programs and data files data structure implementations and program examples from the text are available via the World Wide Web *A New Agenda for Higher Education* William M. Sullivan, Matthew S Rosin, 2008-04-04 In A New Agenda for Higher Education the authors endorse higher education s utility for enhancing the practical as well as intellectual dimensions of life by developing a third different

conception of educational purpose Based on The Carnegie Foundation for the Advancement of Teaching seminar that brought together educators from six professional fields with faculty from the liberal arts and sciences A New Agenda for Higher Education proposes an educational aim of practical reason focusing on the interdependence of liberal education and professional training *Laboratory Manual for Human Biology* Bert Atsma, Sandra Hsu, 2007-02 Designed for the one semester human biology course this full color manual offers activities for 23 laboratory sessions in a variety of formats to allow the instructor to customize these exercises to the needs of their course The lab manual s depth of coverage invites students to explore fundamental concepts of human biology in a laboratory setting *Structure-function Histology* ,1997

Laboratory and Field Studies in Biology Chester Alvin Lawson, Richard E. Paulson, 1960 Laboratory Investigations in Anatomy and Physiology Stephen N. Sarikas, 2007 This concise lab manual is designed for instructors who wish to avoid cookbook style lab instruction for Anatomy Physiology Through the use of an engaging connective learning methodology author Stephen Sarikas builds each lab exercise step on the previous one helping readers to understand complex ideas and make connections between concepts KEY TOPICS Introduction to Anatomy Physiology Body Organization and Terminology Care and Use of the Compound Light Microscope The Cell Cell Structure and Cell Division Membrane Transport Tissues Epithelial and Connective Tissues The Integumentary System The Skeletal System The Axial Skeleton The Appendicular Skeleton Articulations The Muscular System Histology of Muscle Tissue Gross Anatomy of the Muscular System Physiology of the Muscular System The Nervous System Histology of Nervous Tissue The Brain and Cranial Nerves The Spinal Cord and Spinal Nerves Human Reflex Physiology Special Senses The Endocrine System The Cardiovascular System Blood Cells Gross Anatomy of the Heart Anatomy of Blood Vessels Cardiovascular Physiology The Lymphatic System The Respiratory System Anatomy of the Respiratory System Respiratory Physiology The Digestive System Anatomy of the Digestive System Actions of a Digestive Enzyme The Urinary System Urinary Physiology The Reproductive Systems Introduction to the Cat and Removal of the Skin Dissection of the Cat Muscular System Dissection of the Cat Nervous System Dissection of the Cat Ventral Body Cavities and Endocrine System Dissection of the Cat Cardiovascular System Dissection of the Cat Lymphatic System Dissection of the Cat Respiratory System Dissection of the Cat Digestive System Dissection of the Cat Urinary System Dissection of the Cat Reproductive System KEY MARKET For all readers interested in anatomy physiology labs Journal of Education ,1910 *Chicago Schools Journal* ,1928 The Association College Bulletin Chicago George Williams College, Young Men's Christian Association (Chicago, Ill.). College, 1920 The Chicago Schools Journal ,1929

Suggestions for the Teaching of Science in Texas High Schools Gordon Damon, 1922 **Laboratory Manual to Accompany Essentials of Anatomy and Physiology** Kevin T. Patton, 2004-02 Kevin Patton divides the lab activities typically covered in A P lab into 42 subunits allowing instructors the flexibility to choose the units and sequence that integrates with lecture material Basic content is introduced first and gradually more complex activities are developed

Features include procedure check lists coloring exercises boxed hints safety alerts separate lab reports and a full color histology mini reference *Hole's Human Anatomy & Physiology* John Hole,1996 **Texas High Schools** Texas. State Department of Education,1925 **General Catalogue** Santa Barbara State Teachers College,1975 **Exercises for the Anatomy & Physiology Laboratory** Erin C. Amerman,2019-02-01 This concise inexpensive black and white manual is appropriate for one or two semester anatomy and physiology laboratory courses It offers a flexible alternative to the larger more expensive laboratory manuals on the market This streamlined manual shares the same innovative activities based approach as its more comprehensive full color counterpart *Exploring Anatomy Physiology in the Laboratory* 3e **BSCS Green Version High School Biology** ,1963 **Abridged Index Medicus** ,1980 Science Books & Films ,1989

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