

Ganong Animal Physiology

The review students need to excel on their medical physiology course exams and the USMLE This powerful new review follows the format of the acclaimed Katzung & Trevor's Pharmacology Examination & Board Review. It delivers a concise overview of essential high-yield topics and fundamental concepts, followed by USMLE-style Q&A. The chapter-based approach facilitates use with course notes or larger texts. Presented in full color, the book includes numerous flow charts, illustrations, and tables that summarize must-know information. Ganong's Medical Physiology Examination & Board Review succinctly covers all key physiology principles and includes clinical correlations to clarify the connection between physiology and clinical medicine. The book includes two comprehensive 100-question examinations, followed by the correct answer and rationales. Learning aids included bolded key terms, skill-builder questions that prompt readers to review previous material, and end-of-chapter checklists. · Essential for USMLE Step 1 review · An excellent course book for physiology · Companion website offers interactive customizable qBank

Textbook of Pulmonary Vascular Diseases combines basic scientific knowledge on the pulmonary circulatory system at levels of the molecule, cell, tissue, and organ with clinical diagnosis and treatment of pulmonary vascular diseases. State-of-the-art techniques and their potential applications in research, diagnosis, and treatment of pulmonary vascular diseases are also covered. Medical Physiology: Principles for Clinical Medicine richly presents the physiology knowledge necessary for clinical practice. Along with the latest information on how the human body reacts to internal and external changes, the text provides a deep understanding of how physiologic systems coordinate to maintain optimal health. Emphasizing normal physiology, discussions of pathophysiology are also included to show how altered functions are involved in disease processes. This fifth edition focuses on the physiologic principles key to understanding human function, and places them clearly in their fundamental context in clinical medicine. Clinical Focus essays highlight how and where physiology relates to clinical medicine and diagnosis. New Integrated Medical Sciences essays highlight the connections between physiology and other basic sciences, such as pharmacology, biochemistry, and genetics. Extensive chapterrevisions in the Neuromuscular, Gastrointestinal, Renal, and Blood and Immunology parts have been provided by new expert contributors. End-of-chapter USMLE-style review questions, with answers and explanations, as well as new Clinical Application exercises, help students master the material. Conceptual diagrams facilitate comprehension of difficult concepts and presents both normal and abnormal clinical conditions. Active Learning Objectives, Chapter Summaries, and full-color artwork and tables facilitate learning and study. A companion website offers additional resources for students including animations, additional review questions, additional clinical application exercises, advanced clinical problem-solving exercises, and suggested readings. "The concept for this text arose from the 18th Discover Conference on Effect of the Thermal Environment on Nutrient and Management Requirements of Cattle, which was held at the Brown County Inn in Nashville, Indiana November 2-5, 2009"--Pref.

Suitable for veterinarians and students who wish to organize their thinking in physiology, this title covers various sections of physiology relevant for veterinary students including sections on body fluids and compartments, neuromuscular physiology and special senses, respiration, cardiovascular physiology, kidneys.

This book focuses on the fundamentals of plant physiology for undergraduate and graduate students. It consists of 34 chapters divided into five major units. Unit I discusses the unique mechanisms of water and ion transport, while Unit II describes the various metabolic events essential for plant development that result from plants' ability to capture photons from sunlight, to convert inorganic forms of nutrition to organic forms and to synthesize high energy molecules, such as ATP. Light signal perception and transduction works in perfect coordination with a wide variety of plant growth regulators in regulating various plant developmental processes, and these aspects are explored in Unit III. Unit IV investigates plants' various structural and biochemical adaptive mechanisms to enable them to survive under a wide variety of abiotic stress conditions (salt, temperature, flooding, drought), pathogen and herbivore attack (biotic interactions). Lastly, Unit V addresses the large number of secondary metabolites produced by plants that are medicinally important for mankind and their applications in biotechnology and agriculture. Each topic is supported by illustrations, tables and information boxes, and a glossary of important terms in plant physiology is provided at the end.

Reproduction in Domestic Animals, Second Edition discusses the chemistry of gonadotropins and biochemistry of the gonadal hormones. The book presents the immunological characterization of the gonadotropins and the regulation of the secretion of pituitary gonadotropins by the nervous system. The text describes the physiology of reproduction and then discusses the effects of hormones on the development and differentiation of the brain. Another topic of interest is the formation of preovulatory follicles. The section that follows describes the necessity of quantitative female gametes production. The book will provide valuable insights for biologists, zoologists, students, and researchers in the field of animal reproduction.

A system- and disease-based approach to the aspects of gastrointestinal pathophysiology, essential for an understanding of clinical medicine. Bridging the gap between basic science and clinical medicine, this text provides students with a solid understanding of symptom identification and the underlying disease mechanism. Features clinical pearls, learning objectives, study questions, algorithms, and key concepts highlighting the presentation in each chapter.

For a comprehensive understanding of human physiology — from molecules to systems —turn to the latest edition of Medical Physiology. This updated textbook is known for its unparalleled depth of information, equipping students with a solid foundation for a future in medicine and healthcare, and providing clinical and research professionals with a reliable go-to reference. Complex concepts are presented in a clear, concise, and logically organized format to further facilitate understanding and retention. Clear, didactic illustrations visually present processes in a clear, concise manner that is easy to understand. Intuitive organization and consistent writing style facilitates navigation and comprehension. Takes a strong molecular and cellular approach that relates these concepts to human physiology and disease. An increased number of clinical correlations provides a better understanding of the practical applications of physiology in medicine. Highlights new breakthroughs in molecular and cellular processes, such as the role of epigenetics, necroptosis, and ion channels in physiologic processes, to give insights into human development, growth, and disease. Several new authors offer fresh perspectives in many key sections of the text, and meticulous editing makes this multi-authored resource read with one unified voice. Includes electronic access to 10 animations and copious companion notes prepared by the Editors.

The human body is composed of several systems and organs, consisting of millions of cells that need relatively stable conditions to function and contribute to the survival of the body as a whole. The maintenance of stable conditions for the cells against the variations of the external environment is an essential function of the body and is called homeostasis. As a consequence of the loss of homeostasis, a disease is manifested. This book aims to provide the reader with an up-to-date view of the self-regulatory mechanisms that are activated to achieve homeostasis, the pathways that are altered during the disease process, and how medicine can intervene to restore balance in critical patients.

Contractility describes the relative ability of the heart to eject a stroke volume (SV) at a given prevailing afterload (arterial pressure) and preload (end-diastolic volume; EDV). Various measures of contractility are related to the fraction as the SV/EDV or the ejection fraction, and the dynamics of ejection as determined from maximum pressure rise in the ventricles or arteries or from aortic flow velocities determined by echocardiography. At the cellular level, the ultimate determinant of contractility is the relative tension generation and shortening capability of the molecular motors (myosin cross-bridges) of the sarcomeres as determined by the rates and extent of Ca activation, the turnover kinetics of the cross-bridges, and the relative Ca responsiveness of the sarcomeres. Engagement of the regulatory signaling cascades controlling contractility occurs with occupancy and signal transduction by receptors for neurohumors of the autonomic nervous system as well as growth and stress signaling pathways. Contractility is also determined by the prevailing conditions of pH, temperature, and redox state. Short-term control of contractility is fully expressed during exercise. In long-term responses to stresses on the heart, contractility is modified by cellular remodeling and altered signaling that may compensate for a time but which ultimately may fail, leading to disorders.

All of the essential information you need from the world's foremost medical physiology textbook - right in your pocket! Dr. John E. Hall's Pocket Companion to Guyton and Hall Textbook of Medical Physiology, 13th Edition, reflects the structure and content of the larger text, helping you recall and easily review the most essential, need-to-know concepts in physiology. Efficiently review key concepts thanks to a concise, at-a-glance format. Carry the same authoritative, useful knowledge that readers of Guyton have come to trust - right in your pocket. Easily locate more in-depth discussions inside the parent text with abundant cross-references and a parallel chapter organization. New science from the 13th edition of the text keeps you up to date. eBook version included! For the first time, you can access the entire book online or offline across all devices with the Student Consult eBook! Delivers the salient points from the parent text in a manner that is ideal for rapid comprehension of the core concepts in Physiology

Renowned physiology instructor Dr. Linda Costanzo's friendly, logical, easy-to-follow writing style makes Physiology, 6th Edition ideal for coursework and USMLE preparation. Well-designed figures and tables provide handy visuals for procedures or physiologic equations, and step-by-step explanations clarify challenging concepts. This full-color, manageably-sized text offers a comprehensive and consistent overview of core physiologic concepts at the organ system and cellular levels, making complex principles easy to understand. Information is presented in a short, simple, and focused manner – the perfect presentation for success in coursework and on exams. Chapter summaries and "Challenge Yourself" questions at the end of each chapter provide an extensive review of the material and reinforce understanding and retention. Equations and sample problems are integrated throughout the text. NEW! More Clinical Physiology Case Boxes relate to pathophysiology for a clinical context

Ideal for self-assessment and USMLE Step 1 review. Provides a current and concise overview of mammalian and human physiology. Thoroughly revised and updated, examples from clinical medicine have been integrated throughout the chapters to illuminate important physiologic concepts. Features more than 700 illustrations and a self-study section with 630 multiple choice questions.

The leading text on human physiology for more than four decades For more than four decades, Ganong's Review of Medical Physiology has been helping those in the medical field understand human and mammalian physiology. Applauded for its interesting and engagingly written style, Ganong's concisely covers every important topic without sacrificing depth or readability and delivers more detailed, high-yield information per page than any other similar text or review. Thoroughly updated to reflect the latest research and developments in important areas. Ganong's Review of Medical Physiology incorporates examples from clinical medicine to illustrate important physiologic concepts. More than 600 full-color illustrations Two types of review questions: end-of-chapter and board-style NEW! Increased number of clinical cases and flow charts

New edition of the acclaimed and stimulating textbook, with fully revised text, references and illustrations.

A unique feature of this book is the focus on large, domestic animals. Previous editions were considered the "Bible" of reproductive physiology. It covers basic, large animal reproductive physiology, provides species-specific information and is suitable as a textbook for upper-division courses.

A sound knowledge of anatomy and physiology is an essential basis for the effective clinical treatment of companion animals and farm animals alike. The fourth edition of this bestselling book continues to provide a comprehensive description of the anatomy and physiology of dogs and cats. The book builds on these foundations with detailed descriptions of exotic small species including birds, and domestic farm animals, including cows, sheep and pigs, as well as the horse.

This book examines three ways plants respond to their changing environment. The first example can be found in all plants. Despite the extreme changes in weather, plants have to stay where they are and respond to whatever nature produces. Plants have the capacity to respond quickly and yet they can evolve in a single generation. The second example addresses how an individual leaf has to respond rapidly and repeatedly to maintain the proper balance of carbon dioxide (CO₂) and water so that it can photosynthesize but not dry out. This delicate balance is governed by a pair of cells that regulate the size of openings on leaves. The final chapter examines a unique example of a leaf that can move fast enough to trap insects and digest them. This book presents data that led to our understanding of how plants function on different time scales.

This book is intended to give readers a "quick look" at metabolic and endocrine physiology. Emphasis is placed on instructional figures, flow diagrams and tables, while text material has been held to a minimum. In general, the endocrine system is first defined and described, and then each endocrine gland is discussed separately. Where appropriate,

common endocrine disorders have also been included. This text concisely elucidates the endocrine mechanisms responsible for maintaining homeostatic control of important physiologic variables, and to assist the reader in understanding common pathophysiologic deviations from normal. Over 360 multiple-choice questions gauge the reader's capacity to effectively understand the subject material. This new edition contains six new chapters covering: hormone disposition, measurement and secretion; bovine, equine and rodent estrus cycles; primate menstrual cycle; male reproductive system; testosterone, estrogen and progesterone; comparative aspects of endocrinology. Learning objectives have been added at the beginning of each chapter and all of the questions are new.

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Known for its clear presentation style, single-author voice, and focus on content most relevant to clinical and pre-clinical students, Guyton and Hall Textbook of Medical Physiology, 14th Edition, employs a distinctive format to ensure maximum learning and retention of complex concepts. A larger font size emphasizes core information, while supporting information, including clinical examples, are detailed in smaller font and highlighted in pale blue – making it easy to quickly skim the essential text or pursue more in-depth study. This two-tone approach, along with other outstanding features, makes this bestselling text a favorite of students worldwide. Offers a clinically oriented perspective written with the clinical and preclinical student in mind, bridging basic physiology with pathophysiology. Focuses on core material and how the body maintains homeostasis to remain healthy, emphasizing the important principles that will aid in later clinical decision making. Presents information in short chapters using a concise, readable voice that facilitates learning and retention. Contains more than 1,200 full-color drawings and diagrams – all carefully crafted to make physiology easier to understand. Features expanded clinical coverage including obesity, metabolic and cardiovascular disorders, Alzheimer's disease, and other degenerative diseases. Includes online access to interactive figures, new audio of heart sounds, animations, self-assessment questions, and more. Evolve Instructor site with an image and test bank is available to instructors through their Elsevier sales rep or via request at <https://evolve.elsevier.com>.

The leading text on human physiology for more than four decades—enhanced by all new video tutorials A Doody's Core Title for 2019! For more than four decades, Ganong's Review of Medical Physiology has been helping those in the medical field understand human and mammalian physiology. Applauded for its interesting and engagingly written style, Ganong's concisely covers every important topic without sacrificing depth or readability, and delivers more detailed, high-yield information per page than any other similar text or review. Thoroughly updated to reflect the latest research and developments in important areas such as chronic pain, reproductive physiology, and acid-base homeostasis, Ganong's Review of Medical Physiology, Twenty-Sixth Edition incorporates examples from clinical medicine to illustrate important physiologic concepts. Ganong's will prove valuable to students who need a concise review for the USMLE, or physicians who want to keep pace with the ever-changing world of medical physiology. •More than 600 full-color illustrations •Two types of review questions: end-of-chapter and board-style •NEW! Increased number of clinical cases and flow charts •NEW! Video tutorials from the author; high-yield Frequently Asked Question feature with detailed explanations; improved legends that eliminate the need to refer back to the text

Nephrology and Urology of Small Animals provides veterinarians with the knowledge needed to effectively diagnose and treat urologic diseases in canine, feline, and exotic patients. Serving as an easy-to-use, comprehensive clinical reference, the text takes an evidence-based approach to detailed coverage of specific diseases and disorders, including etiology and prevalence, clinical signs, diagnosis, treatment, prevention, prognosis, controversies, and references. Coverage also includes practical review of anatomy and physiology of the urinary system, fundamentals of diagnostic testing and therapeutic techniques.

The aim of the present volume was to give an overview over different available methodological approaches. The specialists may, perhaps, object that in their particular field the level of information is superficial. However, let them look at other chapters in which different approaches are discussed and which, surely, will appear less superficial from the more general point of view. We hope, at least, that crucial references can be traced throughout the book that would enable the readers to go in more detail when desired. It can be traced throughout the book that would enable the readers to go in more detail when desired. It was really one of our ideas to draw the survey of possibilities available. If this can stimulate the readers to use ideas to draw the survey of possibilities available. If this can stimulate the readers to use other methods that those they are routinely using the goals will be met.

A sound knowledge of anatomy and physiology is an essential basis for the effective clinical treatment of companion animals. The new Introduction to Veterinary Anatomy and Physiology Textbook builds on the success of the first edition in its thorough coverage of the common companion animal species. Updated throughout, the new edition features online learning resources, providing students with the opportunity to test their knowledge with questions and visual exercises, while instructors can download questions, figures and exercises to use as teaching aids. An essential first purchase for all those embarking upon a veterinary career Now with on-line resources including self-assessment tools and teaching aids Comprehensive coverage of all major companion animal species New equine chapter 'Applied Anatomy' tips relate theory to clinical practice, showing the relationship between anatomy and physiology and the disease process

Anatomy and Physiology for Veterinary Technicians and Nurses: A Clinical Approach is a comprehensive resource on the anatomy and physiology of dogs and cats, with comparisons to horses, birds, and ruminants. Organized by body system with a comparative approach, the book follows a unique format by addressing anatomy separately from physiology for clarity and improved comprehension. Each anatomy chapter has a corresponding physiology chapter, complete with illustrations, charts, and boxes to promote understanding. Written specifically for veterinary technicians and nurses, the book applies anatomy and physiology to clinical practice, with case examples demonstrating clinical relevance. The figures from the book, additional questions and answers, labeling quizzes, teaching PowerPoints, and a dissection video are available online at www.wiley.com/go/sturtz. This introduction to body system analysis of normal structure and function is a must-have resource for students of veterinary technology and nursing, as well as a useful quick review for the busy professional.

Now in its Fifth Edition, Functional Anatomy and Physiology of Domestic Animals provides a basic understanding of domestic animal anatomy and physiology, taking an interconnected approach to structure and function of the horse, dog, cat, cow, sheep, goat, pig, and chicken. Offers a readable introduction to basic knowledge in domestic animal anatomy and physiology Covers equine, canine, feline, bovine, ovine, ruminant, swine, and poultry anatomy and physiology Considers structure and function in relation to each other for a full understanding of the relationship between the two Provides pedagogical tools to

promote learning, including chapter outlines, study questions, self-evaluation exercises, clinical correlates, key terms, suggested readings, and a robust art program Includes access to a companion website with video clips, review questions, and the figures from the book in PowerPoint

This review presents anatomic considerations, physiology and clinical examples. Ganong begins with an introduction to the cellular basis of medical physiology, and cell physiology is interwoven into the text where applicable.

Basic Physiology is an introduction to vertebrate physiology, stressing human physiology at the organ level, and including requisite anatomy integrated with function. One chapter deals solely with topographic anatomy in atlas form and microscopic anatomy of the principal tissues of the body. Additional chapters cover cellular and general physiology; nervous system, muscle; blood and tissue fluids, heart and circulation; respiration, digestion and absorption; intermediary metabolism; energy metabolism; temperature regulation; nutrition; kidney; endocrinology, including hypophysis, reproduction; thyroids, parathyroids, adrenals and pancreas. All concepts are emphasized and well illustrated, and controversial material is omitted. It is written at a level suited to undergraduate students who have had introductory courses in biology, chemistry, and mathematics, and to more advanced students who wish to review the basic concepts of physiology. This volume should be especially useful as a text for departments of biology, zoology, nursing, health, and agricultural sciences that offer courses in vertebrate and human physiology. Basic Physiology is written by seven subject matter specialists who have considerable experience in teaching their specialty to undergraduates studying physiology and biology.

A succinct, up-to-date, and clinically relevant review of human physiology – trusted by generations of students and clinicians More than 600 full-color illustrations For more than four decades, Ganong's Review of Medical Physiology has been helping those in the medical field understand human and mammalian physiology. Applauded for its interesting and engagingly written style, Ganong's concisely covers every important topic without sacrificing depth or readability and delivers more detailed, high-yield information per page than any other similar text or review. Thoroughly updated to reflect the latest research and developments in important areas such as chronic pain, reproductive physiology, and acid-base homeostasis. Ganong's Review of Medical Physiology incorporates examples from clinical medicine to illustrate important physiologic concepts. Whether you're a student who needs an outstanding review for the USMLE or a physician who wants to keep pace with the ever-changing field of medical physiology, Ganong's belongs on your desk. NEW to this edition: Section introductions that provide a foundation for the topic being discussed Two types of review questions: end-of-chapter and board-style Increased number of clinical cases and flow charts • Expanded legends to help you learn more about the illustrations without having to refer back to the text

The new edition of Physiology: PreTest simulates the USMLE Step 1 test-taking experience by including 100% v style questions and clinical images. A required course at medical schools, it is a core subject area that students need to fully understand. PreTest assesses students' medical knowledge of core basic science topics within a clinical context through multiple-choice clinical-vignette questions. This is helpful now that core basic sciences are taught in an integrated curriculum. To ensure that questions are representative of the style and level of difficulty of the exams, each PreTest book is reviewed by students who either recently passed their shelf/course exam and/or Step 1.

This is a Pageburst digital textbook; Examine the diverse ways animal bodies function at both the systemic and cellular levels with this vital resource. It brings you clear coverage essential to understanding the clinical relevance of anatomical and physiological principles. Fully updated and written by respected veterinary technician educators, this popular textbook is the practical, comprehensive foundation for your success in veterinary technology. Clinical application boxes help you sharpen your skills and apply principles to practice. Test Yourself boxes throughout chapters emphasize important study points. An extensive glossary provides quick reference to hundreds of important terms and definitions. Over 300 new illustrations help you identify structures with rich, realistic clarity. A NEW full color format visually enhances your understanding of anatomic and physiologic concepts. Four NEW chapters give you the latest insight on the chemical basis of life, nutrition and metabolism, pregnancy, development, and lactation, and reptile and amphibian anatomy and physiology. A revised chapter on the cardiovascular system helps you most effectively comprehend the complex functions of the heart and blood vessels.

For B.Sc., B.Sc.(Hons.) and M.Sc. Classes of All Indian Universities

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