The Digestive System The Human Body

The microcirculation of the gastrointestinal tract is under the control of both myogenic and metabolic regulatory systems. The myogenic mechanism contributes to basal vascular tone and the regulation of transmural pressure, while the metabolic mechanism is responsible for maintaining an appropriate balance between O2 demand and O2 delivery. In the postprandial state, hydrolytic products of food digestion elicit a hyperemia, which serves to meet the increased O2 demand of nutrient assimilation. Metabolically linked factors (e.g., tissue pO2, adenosine) are primarily responsible for this functional hyperemia. The fenestrated capillaries of the gastrointestinal mucosa are relatively permeable to small hydrolytic products of food digestion (e.g., glucose), yet restrict the transcapillary movement of larger molecules (e.g., albumin). This allows for the absorption of hydrolytic products of food digestion without compromising the oncotic pressure gradient governing transcapillary fluid movement and edema formation. The gastrointestinal microcirculation is also an important component of the mucosal defense system whose function is to prevent (and rapidly repair) inadvertent epithelial injury by potentially noxious constituents of chyme. Two pathological conditions in which the gastrointestinal circulation plays an important role are ischemia/reperfusion and chronic portal hypertension. Ischemia/reperfusion results in mucosal edema and disruption of the epithelium due, in part, to an inflammatory response (e.g., increase in capillary permeability to macromolecules and neutrophil infiltration). Chronic portal hypertension results in an increase in gastrointestinal blood flow due to an imbalance in vasodilator and vasoconstrictor influences on the microcirculation. Table of Contents: Introduction / Anatomy / Regulation of Vascular

Tone and Oxygenation / Extrinsic Vasoregulation: Neural and Humoral / Postprandial Hyperemia / Transcapillary Solute Exchange / Transcapillary Fluid Exchange / Interaction of Capillary and Interstitial Forces / Gastrointestinal Circulation and Mucosal Defense / Gastrointestinal Circulation and Mucosal Pathology I: Ischemia/Reperfusion / Gastrointestinal Circulation and Mucosal Pathology II: Chronic Portal Hypertension / Summary and Conclusions / References / Author Biography

Introduces the digestive system, including the digestive process, the organs involved in digestion, and common problems and diseases associated with the digestive system.

Describes the anatomy and function of the human digestive system, and explains the ways food and digestion keep the body strong.

"The WHO Classification of Tumours of the Digestive System presented in this book reflects the views of a Working Group that convened for an Editorial and Consensus Conference at the International Agency for Research on Cancer (IARC), Lyon, December 10-12, 2009"--P. [5].

Demonstrates the gross anatomy of the digestive system and discusses the physiology of the system. Following the path of digestion, the gross anatomy of each of the regions is shown on the cadaver, along with a description of the histology of the walls of each region.

Examines the parts and orgainzation of the digestive system, including information on diseases of the digestive system.

Discusses the digestive system, including the different organs and how they work together to digest food, and explains various illnesses that affect the digestive system.

The digestive system helps humans get the most out of every meal and drink. It also rids the body of unwanted substances. This close examination explains the ins and outs

of the digestive system, including its location within the human body, the organs used in digestion, and ways excreting certain materials benefits the human body. Its colorful photographs, diagrams, fact boxes, and sidebars keep readers interested and offer comprehensive insight into one of the most important systems of the human body. Discussion questions are included to strengthen readers' understanding of this life science learning experience.

Survive! Inside the Human Body, Volume 1 begins an epic journey through the human body with a look at the digestive system. This lively, full-color science comic explores Phoebe's insides after she accidentally swallows a microscopic ship. The only p

There is a growing body of experimental and clinical data to suggest that the organs of the digestive system may be subjected to considerable oxidative stress associated with acute and chronic inflammation. Although inflammation and ischemia play a key role in producing oxygen-derived free radicals in the digestive tract, the contribution of other factors, such as transition metal imbalances, lipid and glucose metabolic disturbance, and the interaction with gaseous molecules including nitric oxide and carbon monoxide, has also been suggested. Recent studies have demonstrated that several biomarkers indicating oxidative stress-mediated damage may help in monitoring the degree of disease and planning the design of new therapeutic strategies. In addition, recent advances in 'omics' research (genomics, proteomics, metabolomics, etc.) may bring a breakthrough in the field of gastroenterology and hepatology: Several molecular targets

for oxidative stress have been presented by the 'omics'. This book includes up-to-date reviews on the relevant issues in free radical biology in a combination with expert basic research reviews and clinical aspects in gastroenterology and hepatology. Providing information about new molecular targets for the treatment or prevention of digestive diseases, this book should be read by clinical and basic researchers in gastroenterology and hepatology.

Journey through the Digestive System with Max Axiom, Super Scientist is a Capstone Press publication.

Why is it important tochew your food? Can you guess how long it takes for food to travel through your body? Could you possibly have twenty feet of small intestines? Where does that bad-smelling gas come from? Your digestive system is out of sight and out of mind -- until things don't go right. Then you may wonder how these important organs work! You'll find the answers in Seymour Simon's smooth, well-organized, and fascinating introduction to the digestive system. He explains how it works twenty-four hours a day, turning pizza, sandwiches, milk, and other food into energy and nutrients and waste. Striking photographs on every spread show how major organs including the stomach and intestines move food through your body, and how, eventually, waste is eliminated. Guts takes the mystery out of something that happens to everyone, every day, while at the same time sharing a sense of wonder about the human body.

Comparative Anatomy and Histology: A Mouse and Human Atlas is aimed at the new

mouse investigator as well as medical and veterinary pathologists who need to expand their knowledge base into comparative anatomy and histology. It guides the reader through normal mouse anatomy and histology using direct comparison to the human. The side by side comparison of mouse and human tissues highlight the unique biology of the mouse, which has great impact on the validation of mouse models of human disease. Print + Electronic product - E-book available on Elsevier's Expert Consult platform- through a scratch-off pin code inside the print book, customers will be able to access the full text online, perform quick searches, and download images at expertconsult.com Offers the first comprehensive source for comparing human and mouse anatomy and histology through over 600 full-color images, in one reference work Experts from both human and veterinary fields take readers through each organ system in a side-by-side comparative approach to anatomy and histology - human Netter anatomy images along with Netter-style mouse images Enables human and veterinary pathologists to examine tissue samples with greater accuracy and confidence Teaches biomedical researchers to examine the histologic changes in their mutant mice

Introduces the basics on the human digestive system. Includes photographs and sidebars to further explain more complex concepts.

The apple did not know where she was going to end up, until she ended up in the toilet. Take a trip with the apple. This is a great tool to begin a discussion about food, the

digestive system, nutrition, and how to eat healthy.

This investigation into the human abdomen, stomach, and intestines is packed with vivid high-quality, full-color photographs that provide a deep and textured view into the human midsection. The function and position of such body parts as the abdominal muscles, the ribs, the stomach, the intestines, and the colon are covered along with a discussion of the other organs involved in human digestion, such as the liver, the spleen, and the gallbladder. Combined with intense, 3D-like photographs, this tour of the human digestive system will help readers achieve a more complete understanding of how the stomach and surrounding organs work.

An addition to an anatomy series discusses the parts that make up the human digestive system, what can go wrong, how to treat those illnesses and diseases, and how to stay healthy.

The human digestive system works by introducing water and enzymes into food in order to extract nutrients and minerals from it. This process is assisted by smooth, involuntary muscles along the tract that help push food along. All waste products are excreted at the end of the digestive cycle. Charts that show the inner workings of the digestive system make it easier for students to visualize precisely how the process works. This may be easier for some people to understand by visualization, rather than relying on written descriptions.

The human digestive system plays an important role in processing food in order to

provide nutrients that the body can use. This well-illustrated text presents the basics of anatomy, physiology and disease of the human digestive system by answering a series of questions relevant to the various components of this system. For example, in studying the stomach, the following questions are examined: 1) Where is the stomach located? 2) What does the stomach look like? 3) What does the stomach do? 4) Where do gastric juices come from? 5) What causes ulcers? 6) What causes a stomach ache? and 7) What causes burping? Additionally, most chapters are filled with unusual trivia related to the part of the body being discussed. For example, there was a 42-year-old woman who complained of mild abdominal pain and had 2533 objects removed from her stomach, including 947 pins. The text provides a fun and interesting way to learn more about the digestive system. The text is ideal, whether you are looking for an entertaining and informative read on the workings of the human digestive tract or looking for a text or resource for biology or health classes.

This is an integrated textbook on the digestive system, covering the anatomy, physiology and biochemistry of the system, all presented in a clinically relevant context appropriate for the first two years of the medical student course. One of the seven volumes in the Systems of the Body series. Concise text covers the core anatomy, physiology and biochemistry in an integrated manner as required by system- and problem-based medical courses. The basic science is presented in the clinical context in a way appropriate for the early part of the medical course.

On July 9-10, 2014, the Institute of Medicine's Food Forum hosted a public workshop to explore emerging and rapidly developing research on relationships among the brain, the digestive system, and eating behavior. Drawing on expertise from the fields of nutrition and food science, animal and human physiology and behavior, and psychology and psychiatry as well as related fields, the purpose of the workshop was to (1) review current knowledge on the relationship between the brain and eating behavior, explore the interaction between the brain and the digestive system, and consider what is known about the brain's role in eating patterns and consumer choice; (2) evaluate current methods used to determine the impact of food on brain activity and eating behavior; and (3) identify gaps in knowledge and articulate a theoretical framework for future research. Relationships among the Brain, the Digestive System, and Eating Behavior summarizes the presentations and discussion of the workshop.

In this stunningly original book, Richard Wrangham argues that it was cooking that caused the extraordinary transformation of our ancestors from apelike beings to Homo erectus. At the heart of Catching Fire lies an explosive new idea: the habit of eating cooked rather than raw food permitted the digestive tract to shrink and the human brain to grow, helped structure human society, and created the male-female division of labour. As our ancestors adapted to using fire, humans emerged as "the cooking apes". Covering everything from food-labelling and

overweight pets to raw-food faddists, Catching Fire offers a startlingly original argument about how we came to be the social, intelligent, and sexual species we are today. "This notion is surprising, fresh and, in the hands of Richard Wrangham, utterly persuasive ... Big, new ideas do not come along often in evolution these days, but this is one." -Matt Ridley, author of Genome

See how food travels in your body from the moment you put it inside your mouth until you discharge of the waste products. Did you know that the digestive system is responsible for processing the food you eat and converting it into the energy you use to perform your daily activities. By reading this book, you will realize that your body is a wonderful and amazing machine.

Concepts of Biology is designed for the single-semester introduction to biology course for non-science majors, which for many students is their only college-level science course. As such, this course represents an important opportunity for students to develop the necessary knowledge, tools, and skills to make informed decisions as they continue with their lives. Rather than being mired down with facts and vocabulary, the typical non-science major student needs information presented in a way that is easy to read and understand. Even more importantly, the content should be meaningful. Students do much better when they understand why biology is relevant to their everyday lives. For these reasons,

Concepts of Biology is grounded on an evolutionary basis and includes exciting features that highlight careers in the biological sciences and everyday applications of the concepts at hand.We also strive to show the interconnectedness of topics within this extremely broad discipline. In order to meet the needs of today's instructors and students, we maintain the overall organization and coverage found in most syllabi for this course. A strength of Concepts of Biology is that instructors can customize the book, adapting it to the approach that works best in their classroom. Concepts of Biology also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand--and apply--key concepts.

Medicine is grounded in the natural sciences, among which biology stands out with regard to the understanding of human physiology and conditions that cause dysfunction. Ironically though, evolutionary biology is a relatively disregarded field. One reason for this omission is that evolution is deemed a slow process. Indeed, macroanatomical features of our species have changed very little in the last 300,000 years. A more detailed look, however, reveals that novel ecological contingencies, partly in relation to cultural evolution, have brought about subtle changes pertaining to metabolism and immunology, including adaptations to dietary innovations, as well as adaptations to the exposure to novel pathogens.

Rapid pathogen evolution and evolution of cancer cells cause major problems for the immune system to find adequate responses. In addition, many adaptations to past ecologies have turned into risk factors for somatic disease and psychological disorder in our modern worlds (i.e. mismatch), among which epidemics of autoimmune diseases, cardiovascular diseases, diabetes and obesity, as well as several forms of cancer stand out. In addition, depression, anxiety and other psychiatric conditions add to the list. The Oxford Handbook of Evolutionary Medicine is a compilation of cutting edge insights into the evolutionary history of ourselves as a species, and how and why our evolved design may convey vulnerability to disease. Written in a classic textbook style emphasising physiology and pathophysiology of all major organ systems, the Oxford Handbook of Evolutionary Medicine will be valuable for students as well as scholars in the fields of medicine, biology, anthropology and psychology.

The digestive system is made up of the tongue, the esophagus, the stomach, the intestines, and other parts. But what does the digestive system do? And how do its parts work together to keep your body healthy? Explore the digestive system in this engaging and informative book.

The humorous science writer offers a tour of the human digestive system, explaining why the stomach doesn't digest itself and whether constipation can kill

you.

The Human Body: Linking Structure and Function provides knowledge on the human body's unique structure and how it works. Each chapter is designed to be easily understood, making the reading interesting and approachable. Organized by organ system, this succinct publication presents the functional relevance of developmental studies and integrates anatomical function with structure. Focuses on bodily functions and the human body's unique structure Offers insights into disease and disorders and their likely anatomical origin Explains how developmental lineage influences the integration of organ systems

The Visual Analogy Guides to Human Anatomy & Physiology, 3e is an affordable and effective study aid for students enrolled in an introductory anatomy and physiology sequence of courses. This book uses visual analogies to assist the student in learning the details of human anatomy and physiology. Using these analogies, students can take things they already know from experiences in everyday life and apply them to anatomical structures and physiological concepts with which they are unfamiliar. The study guide offers a variety of learning activities for students such as, labeling diagrams, creating their own drawings, or coloring existing black-and-white illustrations to better understand the material presented.

While buiit to hit multiple NGSS (systems, cause/effect, and math), STEM and technology benchmarks, this book describes why the body's digestive system is truly amazing. Driven by great photography, hi/lo text supports and powerful infographics, this comprehensive book is

your best bet to teach discovering how the human body works ... and learning a few gross facts too!

Describes the structure and function of the human digestive system.

Discusses the organs and fuction of the human digestive system, nutrients essential for good health and how they are processed by the body, and medical treatments of digestive disorders.

Examines the role and function of the digestive system, including the esophagus, stomach, and small intestine.

The Digestive SystemThe Rosen Publishing Group, Inc

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