



Medical Physiology : A Cellular and Molecular approach

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Summary:

Publisher Summary 1

Editors Boron (physiology and biophysics, Case Western Reserve U.), Boulpaep (cellular and molecular physiology, Yale U. School of Medicine), and 26 co-contributors) provide the second edition of their introductory textbook for medical students. The abundantly-illustrated textbook covers the vital human systems (i.e. nervous, cardiovascular, respiratory, reproductive), physiology of cells and molecules, and a separate section on the physiology of aging, metabolism, environmental physiology, and exercise physiology and sports science. While it is primarily intended as an introductory text, the book also would be useful for students in related fields and graduate students in physiological sciences. Access to a companion Web site is included. Annotation ©2009 Book News, Inc., Portland, OR (booknews.com)

Publisher Summary 2

The updated 2nd edition of this accessible and in-depth resource firmly relates molecular and cellular biology to the study of human physiology and disease. Leading physiologists present you with practical, accurate coverage, continually emphasizing the clinical implications of the material. Each chapter explains the principles and organization of each body system, while more than 800 high-quality, full-color line drawings and prominently featured clinical examples clarify every concept. This exceptionally detailed and comprehensive guide to physiology is ideal for a rich, straightforward, state-of-the-art understanding of this essential subject.

- Provides clinical examples of disordered physiology in prominent boxes throughout the text for at-a-glance access to important content.
- Clarifies concepts with the use of 800 color drawings that feature balloon captions explaining key processes.
- Presents material in a consistent style to make the text readable and easy to understand.
- Offers a practical organization by body system for an intuitive and accessible approach to physiology.

- Features access to the complete contents of the book online, plus a full image collection, animations, 150 review questions, and supplemental web notes for more detailed information.
- Keeps you current with updated material, including a new chapter on Physiology of Aging and a new section on hemostasis.
- Offers the latest visual guidance with a revised and updated art program.

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Section II physiology of cells and molecules. Chapter 2. FUNCTIONAL ORGANIZATION OF THE CELL. Chapter 3. SIGNAL TRANSDUCTION. Chapter 4. REGULATION OF GENE EXPRESSION. Chapter 5. TRANSPORT OF SOLUTES AND WATER. Chapter 6. ELECTROPHYSIOLOGY OF THE CELL MEMBRANE. Chapter 7. ELECTRICAL EXCITABILITY AND ACTION POTENTIALS. Chapter 8. SYNAPTIC TRANSMISSION AND THE NEUROMUSCULAR JUNCTION.Â Fetal and neonatal physiology. Section X physiology of everyday life. Chapter 58. METABOLISM. Chapter 59. Regulation of body temperature. Chapter 60. Exercise physiology and sports science. An integrative approach across different scales from molecular sensing to mechanotransduction and gene modulation for physiological regulation of cellular functions will be explored, as well as applications to pathophysiological states in disease. A comprehensive understanding of the roles of physicochemical microenvironment and intracellular responses in determining cellular function in health and disease will also be discussed. download this book free here. <http://upsto.re/vyBRaAL>.

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With obesity, the immune cells important for maintaining metabolic homeostasis are suppressed because immune cell function and immune cell amount are affected by excess fat accumulation in adipose tissue.[7][8] Excess fat accumulation can lead to insulin resistance, and insulin resistance has been linked to meta-inflammation.[8] With insulin resistance, there is an increase in macrophages, mast cells, neutrophils, T lymphocytes, and B lymphocytes, and a decrease in eosinophils and some T lymphocytes.[8].

Medical physiology: A cellular and molecular approach. Philadelphia: Saunders. p. 1227. ISBN 0-7216-3256-4. of Medical Physiology that our author group has overseen, and the 26th edition overall of this important MCQs in Medical Physiology. 138 Pages

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