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Relationship -- Mean Arterial Pressure -- Pulse Pressure -- Normal Range of Arterial Pressure -- Determinants of Blood Pressure -- Measurement of Arterial Pressure -- Total Peripheral Resistance -- Blood Volume -- Suggested Readings -- Chapter 5 Neural and Hormonal Control of the Circulation -- Autonomic Control -- Functional Anatomy -- Neurotransmitters -- Norepinephrine -- Adrenergic Receptors -- Alpha-adrenergic Receptors -- Beta-adrenergic Receptors -- Acetylcholine -- CNS Areas Involved in Control of the Cardiovascular System -- Spinal -- Medullary -- Cortical -- Neurotransmitters in the CNS. Reflex Behavior of the Cardiovascular System -- Baroreceptor Reflex -- Volume Receptor Reflex -- Chemoreceptor Reflex -- Other Reflexes -- Corticohypothalamic Cardiovascular Patterns -- Hormonal Control System -- Adrenal Medulla -- Vasopressin -- Renin-Angiotensin-Aldosterone System -- Erythropoietin -- Atrial Natriuretic Peptide -- Suggested Readings -- Chapter 6 Regulation of Flow and Exchange -- Functional Anatomy -- Endothelial Cells -- Vascular Smooth Muscle -- Exchange Across the Capillary Wall -- Diffusional Exchange -- Capillary Filtration and Reabsorption -- The Lymphatic System -- Edema -- Suggested Readings -- Chapter 7 Regulation of Blood Flow -- The Pulmonary Circulation -- Skeletal Muscle Blood Flow -- Cutaneous Blood Flow -- Cerebral Blood Flow -- Splanchnic Blood Flow -- Renal Blood Flow -- Coronary Blood Flow -- Suggested Readings -- Chapter 8 Integrated Cardiovascular Responses -- Cardiac Output, Venous Return, and Central Blood Volume -- The Cardiovascular Response to Standing -- Reflexes -- Muscle and Respiratory Pumps -- Constriction of Arterioles -- Long-Term Adjustments -- Exercise -- Suggested Readings -- Index -- A -- B -- C -- D -- E -- F -- G -- H -- I -- J -- K -- L -- M -- N -- O -- P -- Q -- R -- S -- T -- V -- W.

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## Sommario/riassunto

Essentials of Cardiovascular Physiology was first published in 1987. Modern cardiovascular physiology ranges from subcellular function to integrated responses that involve all of the body's systems, yet medical students are usually given only a few weeks in which to master this diverse and complex subject. To help overcome these difficulties, Harvey Sparks, Jr., M.D., and Thom W. Rooke, M.D., have written an introductory text which can be read and understood in the two-to-three week period most curricula provide for cardiovascular physiology. Each of the eight chapters integrates basic science with areas of clinical relevance in the simplest, most succinct way for students of medicine, physiology, nursing, and pharmacology. The authors' aim throughout is to select those facts and concepts that are essential to a solid initial comprehension of the subject. The numerous illustrations and flow diagrams will help students understand the complex interrelationships among factors regulating the heart and blood vessels -- and will also be useful for rapid review, because they cover most of the text's major points. Each chapter includes references leading the student to expand treatments of individual topics, and from there to the original literature. The topics covered include: overall arrangement of the circulatory system, electrical activity of the heart, the heart as a pump, systematic circulation, neural and hormonal control of circulation, regulation of flow and exchange, regulation of blood flow in specific organs, and integrated cardiovascular responses.

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