

1. Record Nr.	UNINA9910815441603321
Autore	Sparks Harvey V. <1938->
Titolo	Essentials of cardiovascular physiology // Harvey V. Sparks, Jr. and Thom W. Rooke ; original illustrations by Robert R. Lorenz
Pubbl/distr/stampa	Minneapolis, : University of Minnesota Press, c1987
ISBN	0-8166-5575-8 0-8166-1473-3
Edizione	[1st ed.]
Descrizione fisica	1 online resource (224 p.)
Altri autori (Persone)	RookeThom W
Disciplina	612.1
Soggetti	Cardiovascular system - Physiology Blood - Circulation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographies and index.
Nota di contenuto	Intro -- Contents -- Preface -- Acknowledgments -- Chapter 1 Once Around the Circulation -- Systemic and Pulmonary Circulation -- Transport -- Blood -- Hemostasis -- Suggested Readings -- Chapter 2 Electrical Activity of the Heart -- Ionic Basis for Electrical Activity -- Membrane Potential of Cardiac Cells -- Molecular Basis of Cation Movements Across Cardiac Cell Membranes -- Refractory Period -- Ionic Basis for the Cardiac Membrane Potential -- Membrane Changes in Ventricular Cells -- Membrane Changes in Nodal Cells -- Propagation of Electrical Activity -- Conduction of the Action Potential -- The Electrocardiogram -- Interpretation of the Electrocardiogram -- Change in Mass -- Abnormal Dipoles -- Suggested Readings -- Chapter 3 The Heart as a Pump -- Molecular Basis of Cardiac Muscle Contraction -- Excitation-Contraction Coupling -- The Contraction of Isolated Cardiac Muscle -- Length-Tension Relationship -- Preload and Afterload -- Force-Velocity Relationship -- Contractility -- The Cardiac Cycle -- Cardiac Output -- Factors Influencing Cardiac Output -- Summary of Determinants of Cardiac Output -- Measurement of Cardiac Output -- Energetics of Cardiac Function -- Suggested Readings -- Chapter 4 Systemic Circulation -- Pressure-Flow 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.

---