

Χαρακτηριστικά:

- Straightforward, readable writing style presents the content in a way that doesn't overwhelm and yet familiarizes you with necessary scientific and medical terminology
- Discussions of individual disorders follow a "building block" approach, making understanding easier with 1) background, 2) pathophysiology, 3) etiology, 4) signs and symptoms, 5) diagnostic tests, 6) complications, and 7) treatment
- UNIQUE! *Apply Your Knowledge* questions ask you to use what you've learned to predict *What can go wrong with this structure or system?*, transitioning you from the body's normal anatomy and physiology into its pathophysiology
- UNIQUE! *Think About* questions relate to the text's facts, potential applications, or the integration of concepts, alerting you to important points and helping with self-evaluation, test preparation, and review
- *Bigger Picture* boxes list the effects of disorders and diseases on other body systems
- Case studies provide realistic, clinical applications of the book's concepts
- Hundreds of illustrations clarify and reinforce pathophysiology concepts with photographs, flow charts, and schematic diagrams

Περιεχόμενα:

SECTION I Pathophysiology: Background and Overview

CHAPTER 1 Introduction to Pathophysiology

What Is Pathophysiology and Why Study It?

Understanding Health and Disease

Concept and Scope of Pathophysiology

Beginning the Process: A Medical History

New Developments and Trends

Basic Terminology of Pathophysiology

Introduction to Cellular Changes

Terms Used for Common Cellular Adaptations

Cell Damage and Necrosis

CHAPTER 2 Fluid, Electrolyte, and Acid-Base Imbalances

Fluid Imbalance

Review of Concepts and Processes

Fluid Excess: Edema

Fluid Deficit: Dehydration

Third-Spacing: Fluid Deficit and Fluid Excess

Electrolyte Imbalances

Sodium Imbalance

Potassium Imbalance
Calcium Imbalance
Other Electrolytes
Acid-Base Imbalance
Review of Concepts and Processes
Control of Serum pH
Types of Acid-Base Imbalance
Treatment of Imbalances

CHAPTER 3 Introduction to Basic Pharmacology and Other Common Therapies

Pharmacology
Basic Principles
Drug Effects
Administration and Distribution of Drugs
Drug Mechanisms and Receptors
Responses
Drug Classifications, Prescriptions, and Development
Traditional Forms of Therapy
Physiotherapy
Occupational Therapy
Speech/Language Therapy
Nutrition/Diet
Registered Massage Therapy
Osteopathy
Chiropractic
Complementary or Alternative Therapies
Noncontact Therapeutic Touch
Naturopathy
Homeopathy
Herbal Medicine
Aromatherapy
Biofeedback
Craniosacral Therapy
Asian Concepts of Disease and Healing

CHAPTER 4 Pain

Anatomy and Pathophysiology of Pain
Etiology and Sources of Pain
Structures and Pain Pathways
Physiology of Pain and Pain Control
Characteristics of Pain
Signs and Symptoms
Young Children and Pain
Referred Pain

Phantom Pain
Pain Perception and Response
Basic Classifications of Pain
Acute Pain
Chronic Pain
Headache
Central Pain
Neuropathic Pain
Ischemic Pain
Cancer-Related Pain
Pain Control
Methods of Managing Pain
Anesthesia

SECTION II Defense/Protective Mechanisms

CHAPTER 5 Inflammation and Healing

Review of Body Defenses
Review of Normal Capillary Exchange
Physiology of Inflammation
Definition
Causes
Steps of Inflammation
Acute Inflammation
Pathophysiology and General Characteristics
Local Effects
Systemic Effects
Diagnostic Tests
Potential Complications
Chronic Inflammation
Pathophysiology and General Characteristics
Potential Complications
Treatment of Inflammation
Drugs
Antiinflammatory Herbs and Spices
First Aid Measures
Other Therapies
Healing
Types of Healing
Healing Process
Factors Affecting Healing
Complications Owing to Scar Formation
Burns: Example of Inflammation and Healing
Classifications of Burns
Effects of Burn Injury and Treatments

Healing of Burns
Children and Burns

CHAPTER 6 Infection
Review of Microbiology
Types of Microorganisms
Other Agents of Disease
Resident Flora (Indigenous Normal Flora, Resident Microbiota)
Principles of Infection
Transmission of Infectious Agents
Host Resistance
Virulence and Pathogenicity of Microorganisms
New Issues Affecting Infections and Transmission
Control of Transmission and Infection
Physiology of Infection
Onset and Development
Patterns of Infection
Signs and Symptoms of Infection
Methods of Diagnosis
Treatment and Antimicrobial Drugs
Influenza (Flu): Example of Infection

CHAPTER 7 Immunity
Review of the Immune System
Components of the Immune System
Elements of the Immune System
Immune Response
Diagnostic Tests
Process of Acquiring Immunity
Outcome of Infectious Disease
Emerging and Reemerging Infectious Diseases and Immunity
Bioterrorism
Tissue and Organ Transplant Rejection
Rejection Process
Treatment and Prevention
Hypersensitivity Reactions
Type I: Allergic Reactions
Type II: Cytotoxic Hypersensitivity
Type III: Immune Complex Hypersensitivity
Type IV: Cell-Mediated or Delayed Hypersensitivity
Autoimmune Disorders
Mechanism
Example: Systemic Lupus Erythematosus
Immunodeficiency

Causes of Immunodeficiency
Effects of Immunodeficiency
Acquired Immunodeficiency Syndrome

SECTION III Pathophysiology of Body Systems

CHAPTER 8 Skin Disorders

Review of the Skin
Resident Microbial Flora
Skin Lesions
Skin Inflammatory Disorders
Contact Dermatitis
Urticaria (Hives)
Atopic Dermatitis (Eczema)
Psoriasis
Pemphigus
Scleroderma
Dupuytren's Contracture
Skin Infections
Bacterial Infections
Viral Infections
Fungal Infections
Other Infections
Skin Tumors
Keratoses
Squamous Cell Carcinoma
Malignant Melanoma
Kaposi Sarcoma

CHAPTER 9 Musculoskeletal System Disorders

Review of the Musculoskeletal System
Bone
Skeletal Muscle
Joints
Diagnostic Tests
Trauma
Fractures
Dislocations
Sprains and Strains
Other Injuries
Muscle Tears
Repetitive Strain Injury
Bone Disorders
Osteoporosis
Rickets and Osteomalacia

Paget Disease (Osteitis Deformans)
Osteomyelitis
Abnormal Curvatures of the Spine
Bone Tumors
Disorders of Muscle, Tendons, and Ligaments
Muscular Dystrophy
Primary Fibromyalgia Syndrome
Myositis
Joint Disorders
Osteoarthritis
Rheumatoid Arthritis
Juvenile Rheumatoid Arthritis
Infectious (Septic) Arthritis
Psoriatic Arthritis
Gout (Gouty Arthritis)
Ankylosing Spondylitis
Other Inflammatory Joint Disorders

CHAPTER 10 Blood and Circulatory System Disorders

Review of the Circulatory System and Blood
Anatomy, Structures, and Components
Blood Vessels
Blood
Blood Dyscrasias
Anemias
Blood-Clotting Disorders
Myelodysplastic Syndrome (MDS)
Neoplastic Blood Disorders
Polycythemia
Leukemias
Vascular Disorders
Arterial Disorders
Peripheral Vascular Disease and Atherosclerosis
Aortic Aneurysms
Venous Disorders
Varicose Veins
Thrombophlebitis and Phlebothrombosis

CHAPTER 11 Lymphatic System Disorders

Review of the Lymphatic System
Structures and Function
Composition and Production of Lymph
Lymphatic Disorders
Lymphadenopathy

Lymphomas
Multiple Myeloma or Plasma Cell Myeloma
Lymphedema
Elephantiasis (Filariasis)
Castleman Disease

CHAPTER 12 Cardiovascular System Disorders

Review of the Cardiovascular System

Anatomy of the Heart

Conduction System

Control of the Heart

Coronary Circulation

Cardiac Cycle

Blood Pressure

Heart Disorders

Diagnostic Tests for Cardiovascular Function

General Treatment Measures for Cardiac Disorders

Coronary Artery Disease, Ischemic Heart Disease, or Acute Coronary Syndrome

Cardiac Dysrhythmias (Arrhythmias)

Congestive Heart Failure

Young Children With Congestive Heart Failure

Congenital Heart Defects

Inflammation and Infection in the Heart

Vascular Disorders

Hypertension

Shock

CHAPTER 13 Respiratory System Disorders

Review of the Respiratory System

Purpose and General Organization

Structures in the Respiratory System

Ventilation

Gas Exchange

Diagnostic Tests

General Manifestations of Respiratory Disease

Common Treatment Measures for Respiratory Disorders

Infectious Diseases

Upper Respiratory Tract Infections

Lower Respiratory Tract Infections

Obstructive Lung Diseases

Cystic Fibrosis

Lung Cancer

Aspiration

Obstructive Sleep Apnea

Asthma
Chronic Obstructive Pulmonary Disease
Emphysema
Chronic Bronchitis
Bronchiectasis
Restrictive Lung Disorders
Pneumoconioses
Vascular Disorders
Pulmonary Edema
Pulmonary Embolus
Expansion Disorders
Atelectasis
Pleural Effusion
Pneumothorax
Flail Chest
Infant Respiratory Distress Syndrome
Adult or Acute Respiratory Distress Syndrome
Acute Respiratory Failure

CHAPTER 14 Nervous System Disorders
Review of Nervous System Anatomy and Physiology
Brain
Spinal Cord
Neurons and Conduction of Impulses
Autonomic Nervous System
General Effects of Neurologic Dysfunction
Local (Focal) Effects
Supratentorial and Infratentorial Lesions
Left and Right Hemispheres
Level of Consciousness
Motor Dysfunction
Sensory Deficits
Visual Loss: Hemianopia
Language Disorders
Seizures
Movement Disorder: Tardive Dyskinesia
Increased Intracranial Pressure
Herniation
Diagnostic Tests
Acute Neurologic Problems
Brain Tumors
Vascular Disorders
Infections
Brain Injuries

Spinal Cord Injury
Congenital Neurologic Disorders
Hydrocephalus
Spina Bifida
Cerebral Palsy
Seizure Disorders
Chronic Degenerative Disorders
Multiple Sclerosis
Parkinson Disease (Paralysis Agitans)
Amyotrophic Lateral Sclerosis
Myasthenia Gravis
Huntington Disease
Dementia
Alzheimer Disease
Other Forms of Dementia
Mental Disorders
Schizophrenia
Depression
Panic Disorders
Spinal Cord Disorder
Herniated Intervertebral Disc

CHAPTER 15 Disorders of the Eyes, Ears, and Other Sensory Organs

Sensory Receptors
Classification Based on Location
Classification Based on Stimuli
The Eye
Review of Structure and Function
Diagnostic Tests
Structural Defects
Infections and Trauma
Glaucoma
Cataracts
Retinal Detachment
Macular Degeneration
The Ear
Review of Structure and Function
Hearing Loss
Ear Infections
Chronic Disorders of the Ear

CHAPTER 16 Endocrine System Disorders

Review of the Endocrine System
Endocrine Disorders

Diagnostic Tests
Treatment
Insulin and Diabetes Mellitus
Type 1 and Type 2 Diabetes Mellitus
Complications
Parathyroid Hormone and Calcium
Pituitary Hormones
Growth Hormone
Antidiuretic Hormone (Vasopressin)
Thyroid Disorders
Goiter
Hyperthyroidism (Graves Disease)
Hypothyroidism
Diagnostic Tests
Adrenal Glands
Adrenal Medulla
Adrenal Cortex
Multiple Endocrine Neoplasia Type I

CHAPTER 17 Digestive System Disorders
Review of the Digestive System
Structures and Their Functions
Neural and Hormonal Controls
Digestion and Absorption
Common Manifestations of Digestive System Disorders
Anorexia, Vomiting, and Bulimia
Diarrhea
Constipation
Fluid and Electrolyte Imbalances
Pain
Malnutrition
Tests, Therapies, and Preventions
Basic Diagnostic Tests
Common Therapies and Prevention
Upper Gastrointestinal Tract Disorders
Disorders of the Oral Cavity
Dysphagia
Esophageal Cancer
Hiatal Hernia
Gastroesophageal Reflux Disease
Gastritis
Peptic Ulcer
Gastric Cancer
Dumping Syndrome

Pyloric Stenosis
Disorders of the Liver and Pancreas
Gallbladder Disorders
Jaundice
Hepatitis
Cirrhosis
Liver Cancer
Acute Pancreatitis
Pancreatic Cancer
Lower Gastrointestinal Tract Disorders
Celiac Disease
Chronic Inflammatory Bowel Disease
Irritable Bowel Syndrome
Appendicitis
Diverticular Disease
Colorectal Cancer
Intestinal Obstruction
Peritonitis

CHAPTER 18 Urinary System Disorders
Review of the Urinary System
Structures and Anatomy
Incontinence and Retention
Diagnostic Tests
Treatments for Urinary System Disorders
Diuretic Drugs
Dialysis
Disorders of the Urinary System
Urinary Tract Infections
Inflammatory Disorders
Urinary Tract Obstructions
Urolithiasis (Calculi, or Kidney Stones)
Hydronephrosis
Tumors
Vascular Disorders
Nephrosclerosis
Congenital Disorders
Adult Polycystic Kidney
Wilms Tumor (Nephroblastoma)
Renal Failure
Acute Renal Failure
Chronic Renal Failure

CHAPTER 19 Reproductive System Disorders

Disorders of the Male Reproductive System
Review of the Male Reproductive System
Congenital Abnormalities of the Penis and Trauma
Disorders of the Testes and Scrotum
Inflammation and Infections
Tumors
Disorders of the Female Reproductive System
Review of the Female Reproductive System
Structural Abnormalities
Menstrual Disorders
Infections and Inflammation
Benign Tumors
Malignant Tumors
Infertility
Sexually Transmitted Diseases
Bacterial Infections
Viral Infections
Protozoan Infection

SECTION IV Factors Contributing to Pathophysiology

CHAPTER 20 Neoplasms and Cancer

Review of Normal Cells
Benign and Malignant Tumors
Nomenclature
Characteristics of Benign and Malignant Tumors
Malignant Tumors: Cancer
Pathophysiology
Etiology
Treatment
Prognosis
Examples of Malignant Tumors
Skin Cancer
Ovarian Cancer
Brain Cancer
Cancer Incidences

CHAPTER 21 Congenital and Genetic Disorders

Genetic Control and Congenital Anomalies
Review of Genetic Control
Congenital Anomalies
Genetic Disorders
Single-Gene Disorders
Chromosomal Disorders
Multifactorial Disorders

Developmental Disorders
Diagnostic Tools
Genetic Technology
Genetic Engineering and Gene Therapy
Genetic Diagnosis and DNA Testing
Proteomic Research and Designer Drugs

CHAPTER 22 Complications of Pregnancy
Embryonic and Fetal Development
Embryo Development
Exposure to Teratogens
Fetal Development
Physiologic Changes During Pregnancy
Diagnosis of Pregnancy
Physiologic Changes and Their Implications
Potential Complications of Pregnancy
Ectopic Pregnancy
Preeclampsia and Eclampsia: Pregnancy-Induced Hypertension
Gestational Diabetes Mellitus
Placental Disorders
Blood Clotting Disorders
Rh Incompatibility
Infection
Adolescent Pregnancy

CHAPTER 23 Complications of Adolescence
Review of Changes During Adolescence
Obesity and Metabolic Syndrome
Musculoskeletal Abnormalities
Kyphosis and Lordosis
Scoliosis
Osteomyelitis
Juvenile Rheumatoid Arthritis (Juvenile Idiopathic Arthritis)
Eating Disorders
Anorexia Nervosa
Bulimia Nervosa
Skin Disorders
Acne Vulgaris
Infection
Infectious Mononucleosis
Disorders Affecting Sexual Development
Chromosomal Disorders
Tumors
Menstrual Abnormalities

CHAPTER 24 Complications of Aging

The Aging Process

Mechanisms and Variability of Aging

Senescence and Systemic Impacts

Physiologic Changes With Aging

Hormonal Changes

Reproductive System Changes

Changes in the Skin and Mucosa

Cardiovascular System Changes

Musculoskeletal System Changes

Respiratory System Changes

Nervous System Changes

Digestive System Changes and Nutrition

Urinary System Changes

Comorbidities and Associated Factors

Associated Factors

Multiple Disorders

SECTION V Environmental Factors and Pathophysiology

CHAPTER 25 Immobility and Associated Problems

Factors Involving Immobility

Systemic Effects of Immobility

Musculoskeletal System Effects

Cutaneous Effects

Cardiovascular System Effects

Respiratory System Effects

Digestive System Effects

Urinary System Effects

Neurologic/Psychological Effects

Effects of Immobility on Children

CHAPTER 26 Stress and Associated Problems

Review of the Stress Response

Selye's Stages of the Stress Response

Technostress

Stress and Disease

Potential Effects of Prolonged or Severe Stress

Coping With Stress

CHAPTER 27 Substance Abuse and Associated Problems

Substance Abuse Overview

Opioid Overdose Crisis

Terminology

Predisposing Factors
Environmental/Behavioral Risk Factors
Indications/Recognition of Abuse
Potential Complications of Substance Abuse
Overdose
Withdrawal
Effects on Pregnancy
Cardiovascular Problems
Infection
Neurologic/Psychological Effects
Alcohol
Treatment for Substance Abuse

CHAPTER 28 Environmental Hazards and Associated Problems

Environmental Hazards Overview
Chemicals
Heavy Metals
Acids/Bases
Inhalants
Asbestos
Pesticides
Physical Agents
Temperature Hazards
Radiation Hazards
Noise Hazards
Food- and Water-Borne Hazards
Biologic Agents
Bites and Stings
Appendices

Index