

Contents

<i>About the Editor-in-Chief and Authors</i>	iii
<i>Contributor and Reviewers</i>	v
<i>Preface</i>	xiii
<i>Acknowledgments</i>	xv
<i>Special Features of the Book</i>	xxi
<i>Syllabus</i>	xxvii

Volume I

Chapter 1 Introduction to Medical Surgical Nursing 1–66

- Introduction 3
- Evolution and Trends of Medical and Surgical Nursing 3
- Telehealth and Chatbot Facilities for Easy Access to Patient Care 10
- Concept of Health and Disease 12
- International Classification of Diseases (ICD) 22
- Concepts of Comprehensive Health Care in Medical Surgical Conditions 23
- Health Promotion, Wellness, and Illness Prevention 23
- Health Care Models 23
- Roles and Responsibilities of a Nurse in Medical Surgical Nursing Settings 25
- Medical Surgical Asepsis 31
- Control or Elimination of Infectious Agents 32
- Inflammation 35
- Infection 38
- Immunity 45
- Wound Healing 48
- Care of Surgical Patient 58

Chapter 2 Perioperative Nursing (Pre-, Intra- and Postoperative Nursing) 67–125

- Perioperative Nursing 69
- Organization and Physical Setup of the Operation Theater 69
- Duties and Responsibilities of Nurse in OT 75
- Principles of Operation Theater Attire 76
- Preoperative Phase 83
- Prevention of Accidents and Hazards in OT 87
- BioMedical Waste Management Rules 88
- Intraoperative Phase 93
- Anesthesia 94
- Surgical Instruments 98
- Suture and Suture Material 105
- Operating Room Table 108
- Draping 108
- Positioning 110
- Cardiopulmonary Resuscitation 113
- Postoperative Phase 118
- Pain Management 118
- Legal Aspect in OT 120

Chapter 3 Nursing Care of Patient with Common Signs and Symptoms and Management 127–206

- Fluid and Electrolyte Imbalance 130
- Acid-Base Balance 150
- Acid-Base Imbalance 151
- **Common Problems in a Patient and their Management 154**
- Nausea and Vomiting 154
- Diarrhea and Constipation 157
- Cough 162
- Dyspnea 164
- Fever 165
- Syncope/Unconsciousness 168
- Edema 170
- Pain 173
- Shock 186
- Respiratory Obstruction 190
- Incontinence of Urine 197
- Urinary Retention 198
- Aging problems-geriatric 200

Chapter 4 Nursing Management of Patient with Respiratory System Disorders 207–314

- Review of Respiratory System 209
- Assessment of Respiratory system 215
- Diagnostic Tests to Evaluate Respiratory Function and Structure 217
- Disorders of Respiratory System 225**
 - Diseases of the Upper Respiratory Tract 225
 - Disorders of Lower Respiratory System 230
 - Chest Injuries 284
 - Cystic Fibrosis 286
- Other Important Topics 288**
 - Lung Transplantation 288
 - Chest/Lung Surgery 289
 - Oxygen Therapy and Mechanical Ventilation 292
 - Tracheostomy 300
 - Suctioning 301
 - Endotracheal Intubation 302
 - Chest Tube Drainage System 304
 - Nebulization Therapy 306
 - Chest Physiotherapy 307
 - Airway Adjuncts 308
 - Advanced Airway Technique 309
 - Laryngoscopy/Direct Laryngoscopy 310

Chapter 5 Nursing Management of Patient's with Disorders of Digestive System 315–449

- Introduction 318
- Anatomy and Physiology 318
- Functions of Digestive System 319
- Assessment of Gastrointestinal System 322
- Diagnostic Evaluation 326
- Disorders of Gastrointestinal System 332**
 - Disorders of Oral Cavity 333
 - Disorders of the Esophagus 344
 - Disorders of Gastric and Duodenal Disorders 355
 - Nursing Care of Gastric Surgery Patient 374
 - Intestinal and Rectal Disorders 376
 - Anorectum Disorders 404
 - Liver Disorders 408
 - Disorders of Pancreas 427
 - Disorders of Gallbladder 434
 - Age Related Changes in Gastrointestinal System 442
- Physical Assessment 443**
 - Oral Cavity 443
 - Inspection of Abdomen 445
 - Inspection of a Rectum and Anus 446

Chapter 6 Nursing Management of Patient with Cardiovascular Problem 451–562

- Review of Anatomy and Physiology of Cardiovascular System 454
- Heart 454
- Blood Vessels 454
- Blood 456
- Coronary Circulation 457
- Cardiac Cycle 457
- Conduction System of Heart 459
- Pulse 460
- Blood Pressure 461
- Blood Transfusion 461
- Assessment of Cardiovascular Disorders 463
- Heart Sounds 466
- Laboratory and Diagnostic Findings 467
- Disorders of Cardiovascular System 475**
 - Acquired Valvular Disorders 475
 - Atrial Septal Defect 479
 - Open-Heart Surgery 480
 - Cardiac Arrest 480
 - CPR Guidelines 482
 - Congestive Heart Failure 486
 - Cardiomyopathy 492
 - Coronary Heart Disease 496
 - Angina Pectoris 498
 - Infective Endocarditis 501
 - Percutaneous Coronary Intervention 502
 - Myocardial Infarction 505
 - Coronary Artery Bypass Grafting 507
 - Angiography 509
 - Patent Ductus Arteriosus (PDA) 512
 - Cyanotic Heart Disease 513
 - Cardiogenic Shock 516
 - Hypertension 521
 - Aortic Valvular Stenosis 528
 - Pulmonary Stenosis 529
 - Coarctation of Aorta 529
 - Rheumatic Heart Disease 529
 - Cardiac Dysrhythmias 531
 - Heart Block 538
 - Pericarditis 540
 - Cardiac Tamponade 542
- Arterial Disorders 543**
 - Atherosclerosis and Arteriosclerosis 543
 - Peripheral Arterial Occlusive Disease 544
 - Thromboangiitis Obliterans (Buerger's Disease) 546
 - Aortitis 547
 - Aortoiliac Disease 548
 - Aneurysms 549

- Dissecting Aorta 551
- Arterial Embolism and Arterial Thrombosis 552
- Raynaud's Phenomenon 554
- Thrombosis 554
- Thrombophlebitis and Phlebothrombosis 557
- Chronic Venous Insufficiency 558
- Ulcers 559

Chapter 7 Nursing Management of Patient with Disorders of Blood 563–610

- Review of Anatomy and Physiology of Blood 566
- Bone Marrow 566
- Blood Cell Disorders 567**
 - Anemia 567
 - Clotting Factor Defects 577
 - Platelet Defects 582
 - Thalassemia 584
 - Leukemia 589
- Leukopenia 592
- Agranulocytosis 592
- Lymphoma 593
- Multiple Myeloma 596
- Blood Transfusion 597**
 - Purpose 597
 - Equipment Needed 597
 - Preparation of Procedure 597

Chapter 8 Nursing Management of Patient with Disorders of Endocrine System 611–680

- Review of Anatomy and Physiology of Endocrine System 614
- Assessment and Diagnostic Tests 617
- Disorders of Endocrine System 623**
 - Pituitary Gland 623
 - Pituitary Disorders 624
- Disorders of Thyroid Gland 633**
 - Hypothyroidism 633
 - Hyperthyroidism (Thyrotoxicosis) 639
- Thyroiditis 645
- Goiter 646
- Disorders of Parathyroid Gland 647**
 - Parathyroid Disorders 647
- Disorders of Pancreas 651**
 - Diabetes Mellitus 651
- Disorders of Adrenal Gland 667**
 - Addison's Disease 667
 - Adrenal Tumors 668
 - Tumors of Adrenal glands 669

Chapter 9 Nursing Care of Patient with Integumentary System Disorder 681–752

- Review of Anatomy and Physiology of Skin and its Appendages 684
- Nursing Assessment 687
- Diagnostic Tests 690
- Disorders of Integumentary System 693
- Special Therapy for Dermatologic Conditions 741
- Alternative Therapies 745
- Nursing Care Plan 746
- Drugs Used in Dermatologic Conditions 748

Chapter 10 Nursing Management of Patient with Disorders of Musculoskeletal System 753–834

- Introduction 755
- Review of Anatomy and Physiology Musculoskeletal System 755
- Divisions of Skeletal System 760
- Nursing Assessment 765
- Musculoskeletal Trauma 770**
 - Sprain 770
 - Strain 770
 - Joint Dislocation 771
 - Fractures 773
- Bone Infection 787**
 - Osteomyelitis 787
- Systemic Skeletal Disorder 788
- Osteoporosis 789
- Rheumatoid Arthritis 792
- Osteoarthritis 795
- Gout 798
- Bone Development Disorders 800**
 - Club Foot 800
 - Developmental Dysplasia of Hip 802
 - Osteogenesis Imperfecta 803
 - Varus Knee 805
 - Kyphosis 806
 - Lordosis 808

- Lower Back Pain 809
- Prolapsed/Herniated Disk 810

Musculoskeletal Tumors 812

- Bone Tumors 812
- Spinal Tumor 815
- Pott's Disease 817

- Paget's Disease 817
- Total Joint Replacement (TJR) 818
- Prosthesis 821
- Orthopedic Devices/Instruments 822
- Drugs Used in Musculoskeletal Disorders 826

Chapter 11 Nursing Management of Patients with Communicable Diseases 835–927

- Overview of Infectious Diseases 837
- Infectious Process 838

Communicable Diseases 839

- Tuberculosis 839
- Acute Diarrheal Disease 848
- Hepatitis 850
- Herpes Simplex 857
- Chicken Pox 859
- Smallpox 861
- Typhoid 863
- Typhoid Fever 866
- Meningitis 868
- Gas Gangrene 870
- Leprosy (Hansen's Disease) 873
- Dengue 876
- COVID-19 878
- Plague 880
- Malaria 883
- Poliomyelitis 887
- Diphtheria 889
- Pertusis 890

- Measles 892
- Mumps 893
- Influenza 893
- Tetanus 897
- Yellow Fever 899
- Filariasis 900
- HIV and AIDS 902
- Reproductive Tract Infection 907
- Infections of the Vagina and Vulva 908
- Fetal and Neonatal Infections 909
- Prevention and Control of Infectious Diseases 911
- Rubella 914
- Cholera 916
- Rabies 918
- Ebola 919
- Zika Virus Disease 922
- Chikungunya 923
- Swine Flu 924

Index 929–952

Volume II

Chapter 12 Nursing Management of Patients with Disorders of Ear, Nose and Throat 953–1030

Ear 955

- Anatomy and Physiology of Ear 955
- Physiology of Hearing 958
- External Ear Disorders 963
- Middle Ear Disorders 977
- Inner Ear Disorders 986
- Deafness 991

Nose 993

- Anatomy of Nose 993

- Physiology of Nose 995
- Disorders of Nose 997

The Oral Cavity, Pharynx and Larynx 1008

- Oral Cavity 1008
- Pharynx 1009
- Larynx 1011
- Physical Examination 1015
- Disorders of Oral Cavity, Pharynx and Larynx 1015
- ENT Instruments 1025

Chapter 13 Nursing Management of Patients with Disorder of Eye 1031–1065

- Introduction 1033
- Review of Anatomy and Physiology of an Eye 1033

Disorders of Eye 1040

- Refractive Error 1040

- Eyelid Inflammation 1041
- Conjunctivitis 1042
- Keratitis 1043

- Cataract 1043
- Glaucoma 1045
- Uveitis 1047
- Ocular Tumor 1049
- Posterior Vitreous Detachment 1050
- Retinal Detachment 1050
- Ocular Emergencies 1053
- Color Blindness 1054

Miscellaneous 1055

- National Blindness Control Program 1055
- Eye Banking 1057
- Eye Prosthesis and Rehabilitation 1058
- Role of Nurse in Communication with Visually Impaired Patient 1059
- Nursing Management Principles in Eye Care 1060
- Common Drugs used in Ocular Treatment 1061

Chapter 14 Nursing Management of Patients with Genitourinary Disorders 1067–1146

- Structure and Functions of Genitourinary System 1069
- Anatomy of Kidneys 1069
- Functions of the Kidneys 1071
- Assessment of the Urinary System 1071
- Renal System (Physical Assessment) 1072
- Radiographic Studies 1079
- Glomerulonephritis 1080
- Hydronephrosis 1082
- Nephrotic Syndrome 1085
- Renal Calculus 1087
- Acute Renal Failure 1092
- Chronic Renal Failure (End Stage Renal Failure) 1097
- Hemodialysis 1103
- Kidney Transplantation 1110
- Benign Prostatic Hyperplasia 1116
- Congenital Anomalies of Kidney and Urinary Tract 1118
- Rare Congenital Diseases of Kidney and Urinary Tract 1120
- Renal Cancer 1125
- Prostate Cancer 1135
- Wilms' Tumor (Nephroblastoma) 1138
- Urinary Tract Infection 1139
- Urethral Disorders 1141
- Epispadias 1142
- Urethral Stricture 1143

Chapter 15 Nursing Management of Disorders of Male Reproductive System 1147–1193

- Introduction 1149
- Anatomy and Physiology of Male Reproductive System 1149
- Assessment of Male Reproductive System 1150
- Disorders of Male Reproductive System 1151
- Disorders of Testes and Adjacent Structures 1162
- Disorders of Penis 1168
- Andropause 1171
- Infertility 1172
- Cancer of Penis 1174
- Contraception 1176
- Male Reproductive System Data Collection 1178
- Diagnostic Tests of the Male Reproductive System 1181
- Diseases of Male Breast 1185
- Genital Herpes and Wart 1187
- Sexually Transmitted Diseases 1189

Chapter 16 Nursing Management of Patients with Burns, Reconstructive and Cosmetic Surgery 1195–1236

- Introduction 1198
- Review of Anatomy and Physiology of the Skin and Connective Tissues 1198
- Epidemiology of Burn Injuries and Risk Factors for Burns 1200
- Burns-Causes and Modes of Injury 1200
- Classification of Burns 1202
- Zones of Burn Injury 1206
- Pathophysiology 1207
- Assessment of Burn 1211
- Signs and Symptoms of Burns 1212
- Assessment of Fluid and Electrolyte Loss 1213
- Management of Burns 1214
- Treatment Modalities for Burns 1216
- Nutritional Management 1218
- Hydrotherapy 1219
- Wound Dressing 1220
- Other Therapies 1220
- Surgical Management 1222
- Care of Burn Patient 1224
- Rehabilitation Phase 1225
- Nursing Management 1226
- Special Considerations 1230
- Complications of Burn 1233

Chapter 17 Nursing Management of Patients with Neurological Disorders 1237–1319**Overview of Nervous System 1240**

- Introduction 1240
- Divisions of Nervous System 1240
- Components of Nervous System 1240

Neurologic Examination 1243

- Introduction 1243
- Steps in the Neurologic Examination 1243

Neurological Disorders 1251

- Headache 1251
- Head Injury 1258
- Intracranial and Cerebral Aneurysms 1263

Infectious Disease of Brain 1267

- Meningitis 1267
- Encephalitis 1271
- Brain Abscess 1273
- Neurocysticercosis 1275

- Spinal Cord Injury 1276
- Spinal Cord Compression (SCC) 1280
- Herniation of Intervertebral Disk (Disk Prolapse) 1281

Movement Disorders: Chorea, Seizures and Epilepsies 1282

- Chorea 1282
- Seizures and Epilepsies 1284
- Cerebrovascular Disorders: Cerebrovascular Accident (CVA) 1289
- Bell's Palsy 1292
- Trigeminal Neuralgia/Tic Douloureux 1294
- Peripheral Neuropathies 1296
- Neurodegenerative Disease: Alzheimer's Disease 1298
- Neurodegenerative Disease: Parkinson's Disease 1303
- Guillain-Barré Syndrome 1306
- Myasthenia Gravis 1309
- Multiple Sclerosis 1311

Chapter 18 Nursing Management of Patients with Immunological Problems 1321–1352

- Introduction 1323
- Types of Immunity 1323
- Anatomy and Functions of Immune System 1324
- Difference between Humoral and Cell-Mediated Immunity 1327
- Assessment of Immune System 1329
- Disorders of Immune System 1330

- Autoimmune Diseases 1331
- Immunodeficiency Disorders 1333
- Hypersensitivity Reaction 1334
- Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome 1336
- Immunoglobulin Therapy 1348

Chapter 19 Nursing Management of Patients with Oncological Conditions 1353–1421

- Introduction 1355
- Structure and Characteristics of Normal and Cancer Cells 1355
- Epidemiology of Cancer 1355
- Pathophysiology of the Malignant Process 1356
- Etiology of Carcinogenesis 1356
- Prevention from Carcinogenesis 1358
- Nursing Assessment 1359
- Management Issues Specific to Genetic Factors 1360
- Diagnosis of Cancer 1360

- Types of Cancer 1364
- Staging of Breast Cancer 1368
- Management of Cancer 1392
- Unproven and Unconventional Therapies for Cancer Treatment 1404
- Oncological Emergencies 1405
- Febrile Neutropenic 1409
- Nursing Process: A Patient with Cancer 1410
- Pain Control 1414

Chapter 20A Nursing Management of Patients in Emergency Situations 1423–1463**Emergency 1425**

- Introduction 1425
- Emergency Nursing Principles 1425
- Emergency Nursing Scope 1425
- Standard Protocols for Emergency Department 1425
- Concepts of Triage and Role of Triage Nurse 1429

Respiratory Emergency 1430

- Nursing Assessment of Patient with Respiratory Emergencies 1430
- Airway Obstruction (Choking) 1430
- Pulmonary Embolism 1433

- Pneumothorax 1434
- Emergency Respiratory Procedures 1436

Cardiac Emergency 1437

- Assessment of a Cardiovascular Patient 1438
- Acute Heart Failure 1438
- Pericarditis 1439
- Cardiac Tamponade 1439

Surgical Emergencies 1440

- Acute Appendicitis 1440
- Small Bowel Obstruction (SBO) 1440
- Acute Mesenteric Ischemia 1441

- Diverticulitis 1441
- Rectal Bleeding 1443
- Polytrauma 1443

Bites 1446

- Snakebite 1446
- Poisoning 1451

Thermal Emergencies 1455

- Heat Stroke and Cold Injuries 1455
- Heat Stroke 1455
- Heat Exhaustion 1456
- Frostbite 1456
- Compartment Syndrome 1459

Chapter 20B Nursing Management of Patients in Disaster Situations 1465–1488

- Disaster 1467
- Disaster Nursing 1467
- Disaster Continuum 1468
- Classification of Disaster 1469
- Health Effects of Disasters 1470
- Earthquake 1470
- Tsunami 1472
- Floods 1474
- Cyclone 1475
- Drought 1476
- Landslides 1477
- Heat Wave 1478
- Fire Hazard 1479
- Epidemics 1481
- Terrorism 1482
- Biochemical War 1482
- National Policies Related to Emergency/Disaster Management 1483
- Disaster Planning 1484
- National Disaster Management Plan 1484
- Role of Nurses in Disaster Management 1485
- Conclusion 1486

Chapter 21 Nursing Care of the Elderly 1489–1530

- Introduction to Geriatric Nursing 1491
- Aging 1491
- Physiologic Changes in Elderly 1492
- What is Theory of Aging 1501
- Theories of Aging 1501
- Applying Theories of Aging in Nursing Practice 1506
- Factors Contributing to Long and Healthy Life 1506
- Stress Coping and Techniques 1507
- Geriatric Changes to the Body 1510
- Geriatric Changes to the Mind 1514
- Legal Aspects in Gerontological Nursing 1517
- Gerontological Nurses Roles 1519
- Home Care of Elderly 1520
- Abuse of Elderly 1520
- National Policies and Programs for Elderly 1521
- Factors Affecting Cognitive Aging 1525
- Myths and Reality 1526
- Nursing Process and Geriatric Assessment 1526

Chapter 22 Nursing Management of Patients in Critical Care Unit 1531–1592

- Introduction 1534
- Common Management of Critically Ill Patient 1534
- Nursing Assessment—History and Physical Assessment 1534
- Intensive Care Unit 1536
- Principles of Critical Care Nursing 1537
- Organization and Physical Setup of ICU 1538
- Operational Policies of ICU 1541
- Staffing Pattern in ICU 1542
- Management of Equipment and Supplies 1544
- Special Equipment used in ICU 1545
- Infection Control Protocol in ICU 1557
- Safety Bundles 1559
- Transmission-Based Precaution 1564
- Key Elements of Nursing Management of Critically Ill Patient 1565
- Monitoring Critically Ill Patient 1566
- Advanced Cardiac Life Support 1571
- Guidelines by American Heart Association-Adult Cardiac Arrest Circular Algorithm 1574
- Management of Bradycardia with Pulse (Heart Blocks) by AHA 1576
- Management of Tachycardia with Pulse (Heart Blocks) by AHA 1577
- Management of Opioid Associated Emergency by AHA 1578
- Management of Cardiac Arrest in Pregnancy 1579
- Postcardiac Arrest Care 1579
- Adult Postcardiac Arrest Care Algorithm 1580
- Transitional Care after the Intensive Care Unit 1580
- Ethical and Legal Consideration in Critical Care Unit 1582
- Communication with Patients Family 1583
- Records of Intensive Care Unit 1584

Chapter 23 **Nursing Management of Patients with Occupational and Industrial Disorders** **1593–1610**

- Introduction 1595
- Occupational Health Statistics (India) 1595
- Historical Overview 1595
- Occupational Diseases 1596
- Pneumoconiosis 1597
- Byssinosis 1598
- Bagassosis 1599
- Silicosis 1600
- Asbestosis 1603
- Farmer’s Lung 1604
- Prevention of Occupational Disorders 1606
- Identification of Unrecognized Occupational Hazards 1606
- Strategies for Controlling an Occupational Hazard 1607
- Occupational Health Legislation in India 1609
- Occupational Safety and Health Administration (OSHA) 1609
- Index* 1611–1634