

6TH EDITION

NURSE ANESTHESIA

JOHN J. NAGELHOUT
SASS ELISHA

ELSEVIER

Contents

UNIT I: PROFESSIONAL ISSUES

- 1 NURSE ANESTHESIA: A HISTORY OF CHALLENGE, 1
- 2 NURSE ANESTHESIA SPECIALTY PRACTICE AND EDUCATION IN THE UNITED STATES, 15
- 3 PATIENT CENTERED CARE, CULTURAL COMPETENCE, AND NURSE ANESTHESIA PRACTICE, 20

UNIT II: SCIENTIFIC FOUNDATIONS

- 4 NURSE ANESTHESIA RESEARCH: EMPOWERING DECISION MAKING THROUGH EVIDENCE-BASED PRACTICE, 27
- 5 GENERAL PRINCIPLES, PHARMACODYNAMICS, AND DRUG RECEPTOR CONCEPTS, 48
- 6 PHARMACOKINETICS, 57
- 7 PHARMACOKINETICS OF INHALATION ANESTHETICS, 73
- 8 INHALATION ANESTHETICS, 80
- 9 INTRAVENOUS INDUCTION AGENTS, 93
- 10 LOCAL ANESTHETICS, 110
- 11 OPIOID AND NON-OPIOID ANALGESICS, 128
- 12 NEUROMUSCULAR BLOCKING AGENTS, REVERSAL AGENTS, AND THEIR MONITORING, 140
- 13 AUTONOMIC AND CARDIAC PHARMACOLOGY, 165
- 14 ADDITIONAL DRUGS OF INTEREST, 190
- 15 CHEMISTRY AND PHYSICS OF ANESTHESIA, 201

UNIT III: TECHNOLOGY RELATED TO ANESTHESIA PRACTICE

- 16 ANESTHESIA EQUIPMENT, 229
- 17 CLINICAL MONITORING I: CARDIOVASCULAR SYSTEM, 272

- 18 CLINICAL MONITORING II: RESPIRATORY AND METABOLIC SYSTEMS, 290

- 19 CLINICAL MONITORING III: NEUROLOGIC SYSTEM, 300

UNIT IV: PREOPERATIVE PREPARATION

- 20 PREOPERATIVE EVALUATION AND PREPARATION OF THE PATIENT, 311

UNIT V: INTRAOPERATIVE MANAGEMENT

- 21 FLUID ADMINISTRATION, PERIOPERATIVE GOAL-DIRECTED FLUID THERAPY, AND ELECTROLYTE DISORDERS, 347
- 22 BLOOD AND BLOOD COMPONENT THERAPY, 369
- 23 POSITIONING FOR ANESTHESIA AND SURGERY, 380
- 24 AIRWAY MANAGEMENT, 397
- 25 CARDIOVASCULAR ANATOMY, PHYSIOLOGY, PATHOPHYSIOLOGY, AND ANESTHESIA MANAGEMENT, 441
- 26 ANESTHESIA FOR CARDIAC SURGERY, 479
- 27 PERIOPERATIVE MANAGEMENT OF CARDIAC IMPLANTABLE ELECTRONIC DEVICES, 525
- 28 ANESTHESIA FOR VASCULAR SURGERY, 535
- 29 RESPIRATORY ANATOMY, PHYSIOLOGY, PATHOPHYSIOLOGY, AND ANESTHETIC MANAGEMENT, 563
- 30 ANESTHESIA FOR THORACIC SURGERY, 624
- 31 NEUROANATOMY, NEUROPHYSIOLOGY, AND NEUROANESTHESIA, 645
- 32 RENAL ANATOMY, PHYSIOLOGY, PATHOPHYSIOLOGY, AND ANESTHESIA MANAGEMENT, 682
- 33 HEPATOBILIARY AND GASTROINTESTINAL DISTURBANCES AND ANESTHESIA, 709
- 34 ANESTHESIA FOR LAPAROSCOPIC SURGERY, 743

✓

- 35 ANESTHESIA FOR ROBOTIC SURGERY, 752
- 36 MUSCULOSKELETAL SYSTEM ANATOMY, PHYSIOLOGY, PATHOPHYSIOLOGY, AND ANESTHESIA MANAGEMENT, 760
- 37 THE ENDOCRINE SYSTEM AND ANESTHESIA, 782
- 38 HEMATOLOGY AND ANESTHESIA, 823
- 39 THERMAL INJURY AND ANESTHESIA, 843
- 40 TRAUMA ANESTHESIA, 855
- 41 ANESTHESIA FOR ORGAN TRANSPLANTATION, 871
- 42 OUTPATIENT ANESTHESIA, 889
- 43 ANESTHESIA FOR EAR, NOSE, THROAT, AND MAXILLOFACIAL SURGERY, 904
- 44 ANESTHESIA FOR OPHTHALMIC PROCEDURES, 925
- 45 ANESTHESIA FOR ORTHOPEDICS AND PODIATRY, 946
- 46 THE IMMUNE SYSTEM AND ANESTHESIA, 959
- 47 ANESTHESIA AND LASER SURGERY, 983
- 48 OBESITY AND ANESTHESIA PRACTICE, 998
- 49 REGIONAL ANESTHESIA: SPINAL AND EPIDURAL ANESTHESIA, 1015
- 50 REGIONAL ANESTHESIA: UPPER AND LOWER EXTREMITY BLOCKS, 1042
- 51 OBSTETRIC ANESTHESIA, 1064
- 52 NEONATAL ANESTHESIA, 1092
- 53 PEDIATRIC ANESTHESIA, 1117
- 54 GERIATRICS AND ANESTHESIA PRACTICE, 1136
- 55 POSTANESTHESIA RECOVERY, 1147
- 56 ACUTE PAIN: PHYSIOLOGY AND MANAGEMENT, 1167
- 57 CHRONIC PAIN: PHYSIOLOGY AND MANAGEMENT, 1183
- 58 NONOPERATING ROOM ANESTHESIA, 1194
- 59 ANESTHESIA COMPLICATIONS, 1216