CONTENTS

List of Tables (Text) ................................................. x
List of Tables (Appendices) ................................. xiii
Preface ................................................................. xiv
Acknowledgments ................................................... xvii

section 1

Introduction to Drugs and Drug Administration

chapter 1 Drugs/Agents and Factors Affecting Their Action .............................................. 2
History • Sources of drugs • Drug uses • Dosage forms • Drug names • Classification of drugs • Canadian drug legislation • Drug information resources • The product insert • Principles of drug action • Adverse drug effects • Pharmacokinetic factors in drug therapy • Monitoring drug therapy • Individual variation of pharmacological response • Drug interactions • Physical and chemical incompatibilities • Herbals/botanical medicine • Drug information sources

chapter 2 Principles and Methods of Drug Administration ............................................. 32
The nursing process and medication administration • Administering medications • Nursing process in client teaching • Fostering compliance and cooperation with medication regimens • Nursing process approach to improving cooperation • Home care/Client teaching

chapter 3 Nursing Clients Receiving Drugs Intravenously ........................................... 64
Intravenous administration • Electronic infusion devices • Home care/Client teaching

chapter 4 Calculating Medication Dosages ............................................................... 78
Interpreting the drug order • Ratio and proportion • Practice problems • Conversion between systems of measurement • Practice problems • Calculation of fractional doses • Practice problems • Calculation of dosages based on weight • Practice problems • Pediatric dosage calculations • Practice problems • Calculations involving intravenous administration • Practice problems • Calculations related to solutions • Prevention of medication errors

chapter 5 Drug Therapy for Pediatric Clients ......................................................... 93
Pediatric drug therapy • Nursing children receiving medications • Poisoning • Home care/Client teaching

chapter 6 Drug Therapy for Geriatric Clients ......................................................... 109
Geriatric drug therapy • Nursing care of elderly clients receiving drug therapy • Home care/Client teaching

section 2

Agents that Interfere with Microbial Growth

chapter 7 Antimicrobial Agents ............................................................... 120
Susceptibility of the body to infection • Sources of infection • Identification of the infecting organism • Selection of antimicrobial agents • Classification of antimicrobial agents • Adverse effects • Antibacterial agents • Other antibacterial agents • Urinary tract anti-infectives • Drugs used to treat tuberculosis • Drugs used to treat Lyme disease • Antifungal drugs • Antiviral drugs • Miscellaneous anti-infective agents • Leprostatic agents • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Clients receiving penicillins • Clients receiving cephalosporins • Clients receiving tetracyclines • Clients receiving aminoglycosides • Clients receiving chemotherapy for tuberculosis • Clients receiving sulfonamides and urinary tract anti-infectives
• Clients receiving antifungal agents • Clients receiving antiviral agents • Nursing implementation for clients with AIDS receiving drug treatment • Nursing care plan 7-A: A client with urinary tract infection (UTI) taking nitrofurantoin macrocrystals and phenazopyridine HCl • Nursing care plan 7-B: A client with acquired immunodeficiency syndrome (AIDS) • Evaluation • Home care/Client teaching

chapter 8 Antiparasitic Drug Therapy
Systemic parasitic infections • Other protozoal infections • Anthelmintic agents and intestinal parasitic disorders • Dermatological parasitic disorders • Applying the nursing process • Clients receiving antimalarial drugs • Clients receiving drugs for amebiasis and trichomonal infections • Clients receiving anthelmintics • Clients receiving drugs for dermatological parasites • Nursing care plan: A client with pinworms taking minazole suspension (Thiabendazole) • Home care/Client teaching

chapter 9 Antiseptics and Disinfectants
Phenolic agents • Alcohols and aldehydes • Acids • Iodine and iodophors • Chlorine and chlorophors • Mercury compounds • Silver compounds • Surface-active agents • Oxidizing agents • Chlorhexidine (Hibiclens, Hibistat, Excine) • Applying the nursing process • Handwashing • Nursing care plan: A client with stage III pressure ulcer • Home care/Client teaching

section 3 Agents Used to Control Pain and Inflammation

chapter 10 Analgesics and Antipyretics
Pain • Opioid analgesics • Opioid antagonists • Nonopioid analgesics • Analgesic antipyretics • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Nonopioid analgesics • Opioid analgesics • Parenteral administration • Opioid drugs and the law • Patient-controlled analgesia • Control of chronic pain • Nursing care plan 10-A: A client receiving morphine sulfate following cholecystectomy • Nursing care plan 10-B: A client receiving morphine via epidural catheter following hysterectomy • Pain management in end-of-life care • Evaluation • Home care/Client teaching

chapter 11 Anesthetics
General anesthesia • Regional anesthesia • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Nursing clients with malignant hyperthermia • Nursing care following general anesthesia • Safety and anesthetic agents • Nursing care following regional (local) anesthesia • Nursing care plan: A postsurgical client • Overall assessment

chapter 12 Anti-inflammatory Agents
Nonsteroidal anti-inflammatory drugs (NSAIDs) • Slow-acting antirheumatic agents • Corticosteroids • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Clients receiving nonsteroidal anti-inflammatory agents • Clients receiving slow-acting antirheumatic drugs • Clients receiving corticosteroids • Evaluation • Nursing care plan: A client with arthritis taking aspirin and prednisone • Home care/Client teaching

chapter 13 Agents Used to Treat Hyperuricemia and Gout
Management of acute gouty arthritis • Control of hyperuricemia • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Nursing care plan: A client with hyperuricemia and gout taking probenecid and colchicine • Evaluation • Home care/Client teaching
section 4  Agents Used to Treat Gastrointestinal Disorders

chapter 14 Antacids ................................................. 306
Antacids • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Evaluation • Nursing care plan: A client with peptic ulcer disease taking antacids • Home care/Client teaching

chapter 15 The Autonomic Nervous System and Antispasmodic Drug Action .............................................. 316
The sympathetic nervous system • The parasympathetic (cholinergic) nervous system • Agents that affect the autonomic nervous system • Sympathomimetics (adrenergics) • Sympatholytics (adrenergic blockers) • Parasympathomimetics (cholinergics) • Parasympatholytics (anticholinergics) • Antispasmodics • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Evaluation • Nursing care plan: A client with a peptic ulcer taking isopropamide iodide (Darbid) and an antacid • Home care/Client teaching

chapter 16 Other Agents Affecting Gastrointestinal Function ............................................................. 332
Laxatives • Antidiarrheal agents • Emetics and antiemetics • Histamine H₂ receptor antagonists • Omeprazole (Prilosec) • Lansoprazole (Prevacid) • Metronidazole (Flagyl) • Sucralfate (Carafate) • Misoprostol (Cytotec) • Metoclopramide (Reglan, Emex) • Gastrointestinal enzymes • Applying the nursing process • Clients receiving laxatives • Clients receiving antidiarrheal agents • Nursing care plan: A client with hiatal hernia taking metoclopramide (Reglan) and nizatidine (Axid) • Clients receiving emetics and antiemetics • Clients receiving histamine H₂ receptor antagonists and sucralfate (Carafate) • Nursing clients taking metoclopramide • Nursing clients taking misoprostol • Home care/Client Teaching

section 5  Agents Affecting the Central Nervous System

chapter 17 Sedatives and Hypnotics ......................... 358
Barbiturates • Benzodiazepines • Alcohol (ethanol) • Other sedative-hypnotics • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Evaluation • Clients receiving barbiturates • Clients receiving nonbarbiturates • Nursing care plan: A client with anxiety taking diazepam (Valium) • Home care/Client teaching

chapter 18 Agents Used to Treat Psychiatric Disorders ... 374
Antianxiety drugs (anxiolytics) • Antipsychotic drugs • Agents used to treat affective disorders • Antidepressant agents • Antimanic agents • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Evaluation • Clients receiving anxiolytics • Clients receiving antipsychotic agents • Nursing care plan: A client with bipolar illness receiving lithium carbonate • Clients receiving antidepressants • Clients receiving antimanic drugs • Home care/Client teaching

chapter 19 Anorectic Agents and Other Central Nervous System Agents .............................................. 401
Anorexants • Analeptics • Tacrine HCl (Cognex) • Ergoloid mesylates (Hydergine, etc.) • Nursing care plan: A child with attention-deficit/hyperactivity disorder taking methylphenidate HCl (Ritalin) • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Evaluation • Home care/Client teaching
chapter 20 Agents Used in Musculoskeletal Disorders . . . . 410
Neuromuscular blocking agents • Centrally acting skeletal muscle relaxants •
Direct-acting skeletal muscle relaxants • Skeletal muscle stimulants • Applying
the nursing process • Clients taking neuromuscular blocking agents • Clients
taking centrally acting skeletal muscle relaxants • Clients taking direct-acting
skeletal muscle relaxants • Clients taking skeletal muscle stimulants • Nursing
care plan: A client with myasthenia gravis taking pyridostigmine bromide
(Mestinon) and receiving edrophonium chloride (Tensilon, Reversol) • Home
care/Client teaching

chapter 21 Anti-Parkinson Agents . . . . . . . . . . . . . . . . 426
Dopaminergic agents • Anticholinergic agents • Catechol-o-methyltransferase
inhibitors • Applying the nursing process • Assessment • Nursing diagnoses •
Planning/Goals • Implementation • Evaluation • Nursing care plan: A client
with Parkinson's disease taking levodopa (Larodopa) and amantadine
(Symmetrel) • Home care/Client teaching

chapter 22 Anticonvulsants . . . . . . . . . . . . . . . . . . . . . 438
Epilepsy • Applying the nursing process • Assessment • Nursing diagnoses •
Planning/Goals • Implementation • Nursing care plan: A child with epilepsy
taking phenytoin (Dilantin) and phenobarbital • Evaluation • Home

care/Client teaching

section 6

Agents Used to Treat Respiratory Disorders

chapter 23 Antihistamines and Nasal Decongestants . . . . . 462
Antihistamines • Decongestants • Applying the nursing process • Assessment •
Nursing diagnoses • Planning/Goals • Implementation • Evaluation • Nursing
care plan: A client with a cold taking pseudoephedrine HCl (Sudafed) • Home
care/Client teaching

chapter 24 Expectorant and Antitussive Agents . . . . . . . . 477
Expectorants • Antitussives • Applying the nursing process • Assessment •
Nursing diagnoses • Planning/Goals • Implementation • Nursing care plan:
A child with bronchitis taking guaifenesin (Robitussin) syrup • Evaluation •
Home care/Client teaching

chapter 25 Bronchodilators and Other Respiratory Agents 487
Bronchodilators • Mucolytics • Miscellaneous respiratory drugs • Applying the
nursing process • Assessment • Nursing diagnoses • Planning/Goals •
Implementation • Evaluation • Nursing care plan: A client with asthma using
cromolyn sodium (Intal) and terbutaline sulfate (Brethine) • Home care/Client

section 7

Agents Used in the Eye

chapter 26 Agents Used in the Treatment of Glaucoma . . 504
Agents that decrease the formation of aqueous humor • Agents that increase
the outflow of aqueous humor • Agents that decrease formation and increase
outflow of aqueous humor • Applying the nursing process • Assessment •
Nursing diagnoses • Planning/Goals • Implementation • Nursing care plan: A
client with glaucoma using pilocarpine via Ocusert Therapeutic System •
Evaluation • Home care/Client teaching

chapter 27 Other Agents Used in the Eye . . . . . . . . . . . . . . . . . 518
Mydriatic drugs • Ophthalmic anti-infectives • Antiseptics • Local anesthetics •
Corticosteroids • Nonsteroidal anti-inflammatory agents • Miscellaneous agents
• Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Nursing care plan: A client with an eye infection using vidarabine ointment (Vira-A) • Evaluation • Home care/Client teaching

section 8

**Agents Used to Treat Cardiovascular Disorders**

*chapter 28 Cardiac Stimulants and Depressants* .......... 534
Cardiac glycosides • Amrinone lactate (Inocor) and milrinone lactate (Primacor) • Antiarrhythmic agents • Cardiac stimulants used to treat shock • Applying the nursing process • Clients receiving cardiac glycosides • Clients receiving antiarrhythmic agents • Nursing care plan: An insulin-dependent client with cardiac arrhythmia taking amiodarone HCl (Cordarone) • Clients in cardiac emergencies and shock • Home care/Client teaching

*chapter 29 Agents that Dilate Blood Vessels* .......... 559
Coronary vasodilators • Myocardial infarction • Peripheral vasodilators • Applying the nursing process • Clients receiving coronary vasodilators • Clients receiving peripheral vasodilators • Nursing care plan: A client with angina using nitroglycerin transdermal (Nitro-Dur) • Home care/Client teaching

*chapter 30 Agents Affecting Blood Clotting* .......... 577
Anticoagulants • Antiplatelet agents • Thrombolytic agents • Tissue plasminogen activator (t-PA) • Hemorheologic agents • Hemostatic agents • Applying the nursing process • Nursing clients receiving anticoagulants • Nursing clients after intracoronary thrombolysis • Nursing care plan: A client with acute myocardial infarction receiving alteplase (Activase), a tissue plasminogen activator • Home care/Client teaching

*chapter 31 Diuretics and Antihypertensives* .......... 598
Diuretics • Antihypertensive agents • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Long-term client management • Management of hypertensive emergencies • Nursing care plan: A client with hypertension taking enalapril maleate (Vasotec) hydrochlorothiazide • Evaluation • Home care/Client teaching

section 9

**Agents Affecting Nutrition**

*chapter 32 Agents Used to Treat Anemias* .......... 630
Iron deficiency anemia • Megaloblastic anemias • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Nursing care plan: A client with Crohn's disease taking vitamin B₁₂ • Evaluation • Home care/Client teaching

*chapter 33 Vitamins, Minerals, and Other Nutritional Agents* .......... 641
Protein • Fat • Carbohydrate • Vitamins • Minerals • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Evaluation • Nursing care plan: A client with congestive heart failure receiving a diuretic with a potassium supplement • Home care/Client teaching

*chapter 34 Agents Used in the Treatment of Hyperlipidemia* .......... 660
Hyperlipidemia • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Nursing care plan: A client with hyperlipidemia receiving lovastatin (Mevacor) • Evaluation • Home care/Client teaching
section 10

**Agents Used to Correct Hormonal Imbalance**

**chapter 35 Agents Affecting Thyroid, Parathyroid, and Pituitary Function** 672

Thyroid disorders • Parathyroid disorders • Pituitary disorders • Applying the nursing process • Clients taking thyroid medication • Clients taking antithyroid medication • Clients taking medication for parathyroid disorders • Clients taking pituitary hormones • Nursing care plan: A client with diabetes insipidus using lypressin spray (Diapid nasal spray) • Home care/Client teaching

**chapter 36 Agents Used to Treat Hyperglycemia and Hypoglycemia** 696

Insulin therapy • Oral hypoglycemic agents • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Nursing care plan: A client with diabetes using an oral hypoglycemic, glipizide (Glucotrol) • Evaluation • Home care/Client teaching

section 11

**Agents Affecting the Reproductive System**

**chapter 37 Sex Hormones** 722

Female sex hormones • Estrogen and progesterone combinations • Ovulation stimulants • Male sex hormones • Impotence • Anabolic agents • Danazol (Cyclomen ®, Danocrine) • Nafarelin acetate (Synarel) and histrelin acetate (Supprelin) • Finasteride (Proscar) • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Clients taking ovulation stimulants • Nursing care plan: A client with endometriosis treated with danazol (Danocrine) • Evaluation • Home care/Client teaching

**chapter 38 Agents Used in Obstetrical Care** 744

Uterine stimulants • Abortifacients • Uterine relaxants • Lactation suppressants • Rh(D) immune globulin (Gamulin Rh, HypRho-D, RhoGAM, MICRhoGAM, Mini-Gamulin Rh) • Applying the nursing process • Clients taking drugs that influence labor and delivery • Clients taking abortifacients • Clients taking uterine relaxants • Clients taking lactation suppressants or stimulants • Evaluation • Nursing care plan: A pregnant client using ritodrine HCl (Yutopar) • Home care/Client teaching

section 12

**Additional Therapeutic Agents**

**chapter 39 Agents Used in the Treatment of Cancer** 760

Alkylating agents • Antimetabolites • Mitotic inhibitors • Antibiotics • Hormones • Radioactive drugs • Biologic response modifiers • Miscellaneous antineoplastic agents • Combination therapy • Adjuvant agents • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Special drug delivery methods • Safe handling of cytotoxic drugs • Nursing care plan: A client receiving chemotherapy for lung cancer • Clients receiving investigational agents • Evaluation • Home care/Client teaching

**chapter 40 Agents Used in the Treatment of Skin Disorders** 797

Drugs used in dermatological therapy • Diabetic foot ulcers • Antineoplastic agents • Agents used to treat burns • Dextranomer (Debrisan) • Minoxidil (Rogaine) • Masoprocol (Actinex) • Applying the nursing process • Assessment • Nursing diagnoses • Planning/Goals • Implementation • Clients receiving antifungal agents • Nursing the burn client • Nursing care plan: A child with burns being treated with Mafenide (Sulfamylon) • Evaluation • Home care/Client teaching
chapter 41 Substance Abuse ........................................... 819
Opiate abuse • Central nervous system depressant abuse • Central nervous
system stimulants • Cannabis abuse • Psychodelic agents • "Ecstasy" • Tobacco
• Inhalant abuse • Applying the nursing process • Assessment: Screening for
substance abuse • Nursing diagnoses • Planning/Goals • Implementation:
Nursing care for drug abuse • Nursing care during detoxification • Treatment of
substance abuse • Nursing care plan: A client with substance abuse receiving
naloxone HCl (Narcan) • Impaired health care workers • Establishing a drug-
free workplace • Substance abuse education • Evaluation • Home care/Client
teaching

chapter 42 Agents that Affect Immunity ......................... 843
Functions of the immune system • Agents that provide active or passive
immunity • Interferons and interleukins • Immunosuppressant drugs •
Applying the nursing process • Clients receiving agents to enhance the
immune system • Clients receiving agents to suppress the immune system •
Nursing care plan: A client receiving muromonab-CD3 (Orthoclone OKT3)
following heart transplantation • Home care/Client teaching

Appendices ..................................................................... 871
Glossary ....................................................................... 899
Index ........................................................................... 925