

Medical-Surgical Nursing

A

Nursing Process Approach

Nursing

A Nursing Process Approach

Barbara C. Long, MSN, RN

Associate Professor Emeritus of Medical-Surgical Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Wilma J. Phipps, PhD, RN, FAAN

Professor Emeritus of Medical-Surgical Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Virginia L. Cassmeyer, PhD, RN, CS

Associate Professor
School of Nursing
University of Kansas
Kansas City, Kansas

THIRD EDITION

with 725 illustrations and 9 color plates



St. Louis Baltimore Boston Chicago London Philadelphia Sydney Toronto



Dedicated to Publishing Excellence

Publisher: Alison Miller
Editor: Terry Van Schaik
Developmental Editor: Janet Livingston
Project Manager: John Rogers
Book Designer: Susan Lane

THIRD EDITION

Copyright © 1993 by Mosby-Year Book, Inc.
A Mosby imprint of Mosby-Year Book, Inc.

Previous editions copyrighted 1985, 1989

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission from the publisher.

Permission to photocopy or reproduce solely for internal or personal use is permitted for libraries or other users registered with the Copyright Clearance Center, provided that the base fee of \$4.00 per chapter plus \$.10 per page is paid directly to the Copyright Clearance Center, 27 Congress Street, Salem, MA 01970. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collected works, or for resale.

Printed in the United States of America

Mosby-Year Book, Inc.
11830 Westline Industrial Drive
St. Louis, Missouri 63146

Library of Congress Cataloging in Publication Data

Medical-surgical nursing : a nursing process approach / [edited by]
Barbara C. Long, Wilma J. Phipps, Virginia L. Cassmeyer. — 4th ed.
p. cm.

Includes bibliographical references and index.

ISBN 0-8016-6672-4

1. Nursing. 2. Surgical nursing. I. Long, Barbara C.
II. Phipps, Wilma J., 1925- . III. Cassmeyer, Virginia.

[DNLM: 1. Nursing Care. 2. Nursing Process. 3. Surgical Nursing.
WY 150 M48933]

RT41.E87 1993

610.73—dc20

DNLM/DLC

for Library of Congress

92-49614
CIP

Contributors

Terri Abraham, MSN, RN, CCRN

Nurse Manager, ICU
St Mary's Hospital
Richmond, Virginia

Martha L. Allen, MSN, RN

Head Nurse, Medical ICU
University Hospitals of Cleveland
Clinical Instructor in Medical-Surgical
Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Dorothy R. Blevins, MSN, RN

Associate Professor
Kent State University School of Nursing
Kent, Ohio

Mary Jo Boehnlein, MSN, RN, CNA

Director Operating Room, Recovery
Room, and Ambulatory Surgery
Mount Sinai Medical Center
Cleveland, Ohio

Frances R. Chester, BSN, RN, MPA, CPQA

Quality Management/Risk Management
Specialist
Weston, Hurd, Fallon, Paisley and Howley
Cleveland, Ohio

Elizabeth Cameron Eckstein, MSN, RN

Infection Control Nurse
Cleveland VA Medical Center
Cleveland, Ohio

H. Fred Farley, MSN, RN

Vice President of Nursing
Arnot Ogden Memorial Hospital
Elmira, New York

Sally M. Featherstone, MN, RN, CS

Director, Psychiatric Nursing
Barnes Hospital at Washington University
Medical Center
St. Louis, Missouri

Diane E. Fritsch, MSN, RN CCRN

Clinical Nurse Specialist, Trauma
Critical Care Nursing Service
MetroHealth Medical Center
Cleveland, Ohio

Greer Glazer, PhD, RN

Associate Professor of Nursing
Kent State University
Kent, Ohio

Rosemarie Hogan, MSN, RN

Assistant Dean of Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Maura A. Hopkins, MSN, RN

Assistant Director of Nursing
Specialty Services
Kaiser Permanente Medical Center
Santa Rosa, California

Donald D. Kautz, MSN, RN, CS, CRRN

Doctoral Candidate
University of Kentucky College of Nursing
Lexington, Kentucky

**Deborah Goldenberg Klein, MSN, RN,
CS, CCRN**

Clinical Nurse Specialist
Trauma/Critical Care Nursing Service
MetroHealth Medical Center
Clinical Instructor, Acute and Critical
Care Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Denise M. Kresevic, MSN, RN, CS

Clinical Nurse Specialist
University Hospitals of Cleveland
Clinical Instructor in Medical-Surgical
Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Mary Kay Lehman, MSN, RN

Doctoral Candidate
Case Western Reserve University
Instructor in Medical-Surgical Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Ruth A. Lincoln, MSN, RN, RNC

Advanced Clinical Nurse
University Hospitals of Cleveland
Clinical Instructor in Medical-Surgical
Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Gail Osterfield, MSN, RN

Assistant Professor of Nursing
Kent State University
Kent, Ohio

Carol G. Phipps, MSN, RN

Head Nurse, Preadmission Assessment
and Teaching Center
University Hospitals of Cleveland
Cleveland, Ohio

Dora A. Rice, MSN, RN, CIC

Infection Control Nurse
Cleveland VA Medical Center
Cleveland, Ohio

Rebecca Anne Roberts, MSN, RN, ET

Clinical Nurse Specialist
University Hospitals of Cleveland
Clinical Instructor in Medical-Surgical
Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Grace A. Rotter, MSN, RN, CIC

Clinical Quality Manager
Cleveland VA Medical Center
Clinical Instructor in Community Health
Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Elizabeth Anne Schenk, MSN, RN

Vice President of Nursing
Heather Hill Inc.
Munson, Ohio

Susan Moeller Schneider, MSN, RN
Oncology Clinical Nurse Specialist
University Hospitals of Cleveland
Clinical Instructor of Medical-Surgical
Nursing
Frances Payne Bolton School of Nursing
Case Western Reserve University
Cleveland, Ohio

Barbara J. Sibley, MA, MS, ND, RN, RNC
Former Advanced Clinical Nurse
Psychiatric Mental Health Nursing
University Hospitals of Cleveland
Cleveland, Ohio

Carol E. Smith, PhD, RN
Professor, School of Nursing
University of Kansas
Kansas City, Kansas

Roberta A. Stokes, MSN, RN, CHN,
CNN, CS
Nurse Educator, Transition Care Unit
Cleveland Clinic Foundation
Cleveland, Ohio

Kathryn Sabo Thompson, MSN, RN
Project Leader, Special Care Unit
University Hospitals of Cleveland
Cleveland, Ohio

M. Eileen Walsh, MSN, RN
Assistant Professor, School of Nursing
Medical College of Ohio
Coordinator, Cardiovascular Risk
Intervention Programs
H.L. Morse Center
Toledo, Ohio

Judith H. Watt-Watson, MScN, RN
Clinical Associate, Professor
School of Nursing, University of Toronto
Toronto, Ontario, Canada

E. Ronald Wright, PhD
Associate Professor of Nursing and Biology
Case Western Reserve University
Cleveland, Ohio

Nancy Fugate Woods, PhD, RN, FAAN
Professor and Chair
Parent and Child Nursing
University of Washington
Seattle, Washington

Mary A. (Sandy) Wyper, PhD, RN
Assistant Professor of Nursing
Kent State University
Kent, Ohio

Lynne C. Yurko, BSN, RN
Unit Manager, Burn Intensive Care Unit
MetroHealth Medical Center
Cleveland, Ohio

REVIEWERS

The publisher and authors wish to acknowledge the assistance of the following reviewers:

Molly J. Allison, BSN, MSN
Angelo State University
Betty Aubuchon, RN, PhD
Southern Illinois University at Edwardsville
Janice E. Bachtell, PhD, RN
Northern Virginia Community College
Lois K. Baker, RN, PhD, CPNP
Cedarville College
Esther Bay, MSN, CCRN, CS
Henry Ford Community College
Mary Ellen Beebe, BSN, MN, MSN
Lakeshore Technical College
Mary Ruth Beeber, BSN, MAN
Gannon University
Clara W. Boyle, BS, MS, EdD
San Jose State University
Deanza College
Daryle L. Brown, BSN, MA, MED, EdD
Pace University
Carole Broxson, BSN, MSN
Sinclair Community College
Karen D. Carpenter, PhD, RN, CCRN
University of South Carolina-Coastal Carolina
College
Janet A. Conway, RN, PhD
Cedarville College
Peggy Craik, BSN, MSN, MBA
University of Mary Hardin-Baylor
Sheila Cunningham, BSN, MSN
Neumann College
Lorraine Delehanty, BSN, MSN
Lakewood Community College
Chris Gehlbach, BSN, MSN
Sauk Valley Community College

Barbara A. Hagerich, MSN, RN
Mercy Regional Health System
Dorothy Susan Hayes, ADN, BS
Madisonville Health Technology Center
Elizabeth L. Hughes, MSN, RN, CDE
Barnes Hospital
Patricia A. Jablonski, RN, MSN
Hudson Valley Community College
Albany Medical Center
Kay Setter Kline, RN, BA, BSN, MSN, PhD
Grand Valley State University
Dianna Koerner, BSN, MS, MN
Fort Hays State University
Pamela D. Korte, BSN, MSN
Monroe Community College
Mary LeGrand, RN, BSN
Barnes Hospital
Laura Jean Looper, RN, BA, MA
College of Marin
JoAnn Lowdon, RN, BA, MALS
Blue Ridge Community College
Sandra E. Marra, RN, MSN, MA
West Virginia University
Edwina A. McConnell, RN, PhD
Texas Tech University-Health Sciences Center
Carolyn Y. Middendorf, MN, RN
Washburn University
Betty Jean Oeding, BSN, MSN
College of the Desert
Helen Ortega, RN, C, MS
Napa Valley College
Anna G. Pierce, RN, PhD
Columbia University

Susanne Ptak, BS, GN, MA
Orange County Community College
Susan A. Reed, MSN, RNCS
Fort Howard Veterans Administration Medical
Center
Jean L. Reese, BSN, MN, PhD
University of Iowa
M. Gaie Rubenfeld, RN, MS
Eastern Michigan University
Nancy L. Rubinski, BS, MA
Muskegon Community College
Anna Louise Scandiffio, RN, MS
Veterans Affairs Medical Center
Elaine Schmidt, RN, MSN
Indiana Vocational Technical College
Sally E. Schuster, BSN, MSN
Gannon University
Catherine Seibold, BS, BSN, MSN
Gannon University
Marlene Kay Seller, RN, BSN, MN
Labette Community College
Carolbeth Snyder, BSN, RNC
Wake Technical Community College
Pamela L. Sonney, RN, MSN, FNP, C
Wake Technical Community College
Constance R. Uphold, PhD, ARNP, RN-C
University of Florida
Janis Waite, RN, MSN
Illinois Central College
Kathleen S. Whalen, BSN, MN
Community College of Denver
Lois White, RN, PhD
Del Mar College

Preface

Medical-surgical nursing practice encompasses the nursing care of adults who are at risk for or who are experiencing pathophysiologic disorders. The study of medical-surgical nursing, therefore, includes knowledge of pathophysiologic disorders (including medical therapy), methods of prevention, and nursing activities (thought processes and actions) to assist persons to achieve their optimal health. If “everything” the nurse should know to achieve these ends were included in one text, the book itself would be too extensive for the student, not only in scope but also in physical size. To facilitate learning, the authors of this text have chosen to focus on the *essential* information required by students in their first medical-surgical nursing course. Content covered in great detail in other nursing texts, such as fundamentals of nursing or care of children, is summarized briefly (if appropriate) or omitted.

Nursing Process continues to be the approach used in this text, most especially in the latter units that discuss pathophysiologic disorders. Greater emphasis has been placed in this third edition in correlating the content of the *Implementation* sections with that of *Data analysis: nursing diagnoses*; this change should facilitate student learning.

Throughout the book the recipients of nursing services are referred to as *patients* rather than *clients*. Although *client* is widely used in the nursing community, the article “Complexities and Clarity in Nurse-Client and Nurse-Patient Relationships” by L. Nowakowski, which appeared in the July-August 1985 issue of the *Journal of Professional Nursing*, makes a real distinction between who is a client and who is a patient. Using her framework, we decided that *patient* was a better term to use in this book. We found Nowakowski’s criteria for differentiating between clients and patients to be thought provoking and helpful, and we recommend the article to the reader.

ORGANIZATION

The first five units of the book focus on general information required for medical-surgical nursing practice regardless of underlying functional problems or pathologies. Unit One introduces the student to the *nature of medical-surgical nursing*, reviewing important concepts of health and illness, nursing process, ethics in nursing practice, and quality assurance. Unit Two focuses on *health promotion*, including discussions of cultural influences affecting patient responses, special needs of the elderly, and stress management. Unit Three describes the nature of and care required

for persons with *common problems* encountered in medical-surgical nursing practice; fluid and electrolyte imbalances; acid-base imbalances; shock; pain; cancer; sleep disorders; substance abuse; chronic illness; and loss, dying, and death. Content related to *infection* is grouped in Unit Four. The chapter on biologic defense mechanisms provides the underlying theory for the following chapters on infection control, sexually transmitted diseases, and AIDS. Unit Five provides information on the care of patients during the perioperative period.

The next six units discuss specific problems of functional areas: gas transport (Six), metabolic and endocrine (Seven), digestion or elimination (Eight), sexual and reproductive (Nine), cognition, sensation and motion (Ten), and defense and protection (Eleven). The overall organization of chapters in these units is as follows:

REVIEW OF ANATOMY AND PHYSIOLOGY PREVENTION AND HEALTH EDUCATION

MAJOR HEALTH PROBLEMS

Etiology/Epidemiology

Pathophysiology

Nursing Process

Assessment

Data analysis: nursing diagnoses

Planning: expected patient outcomes

Implementation

Assisting with achievement of therapeutic goals

Interventions to achieve patient outcomes

Evaluation

The final unit discusses care of persons in special environments of care: emergencies and disasters in the community, critical care units, and home care.

NEW TO THIS EDITION

Changes in this edition include *new chapters* on cultural influences on health and illness prevention, promotion of health in the elderly, sleep disorders, AIDS (now a separate chapter), organ transplantation, and home care of the ill adult. Fluid and electrolyte imbalances have been separated from acid-base imbalances into two chapters. Content on the liver has been separated out and placed in the metabolic and endocrine unit because of the liver’s major

metabolic functions. Content on biliary and pancreatic problems has been placed in the digestion unit.

Reflecting today's patient population, content on the care of the *elderly* has been increased. Content on elderly persons now includes a new chapter "Promotion of Health in the Elderly." Assessment, interventions, and common complications in elderly persons are summarized in new highlighted boxes throughout the text. A section on "Physiologic Changes with Aging" is included in chapters with reviews of anatomy and physiology.

Etiology of specific disorders is discussed more fully in the text, and the *pathophysiology* content has been expanded in many instances to indicate the bases of observed symptoms. Rationales for nursing interventions have been added when indicated. The implementation sections have two divisions: activities that promote achievement of therapeutic goals and activities directed specifically toward achievement of patient outcomes. This organization should help the student understand the differences between interdependent and independent nursing actions.

Also new to this edition is increased emphasis on the national health objectives, rights of disabled persons, and the right to die with dignity. The *National Health Objectives for Year 2000* are introduced in Chapter 5: Health Promotion: Nutrition and Exercise and then highlighted in appropriate chapters. Information on the *Americans with Disabilities Act* is discussed in Chapter 14: Chronic Illness. The topics of *Advance Directives* and *Living Wills* are discussed in Chapter 15: Loss, Dying, and Death and are referred to in appropriate chapters.

ADDITIONAL FEATURES

Tables of medical information provide a quick *review* for the student. The use of *boxes* for highlighting important information has been continued based on positive input from readers and reviewers. Boxes have been numbered in this edition to facilitate box identification. Recurring boxes throughout the text are specially designed so they are easy to locate and present patient teaching, guidelines for care, and nursing research. Selected *nursing care plans* have been included to serve as models for students developing their own care plans. Other pedagogic features include chapter objectives, chapter outlines, summaries of chapter content, and study questions. Normal laboratory values, abbreviations in common usage, and recommended daily dietary allowances can be found in the appendices.

TEACHING-LEARNING PACKAGE

For the third edition of our text we are pleased to offer an extensive number of ancillary products for instructors and students to use in class and clinical settings.

Instructor's Resource Manual

Includes topical outlines for each chapter and suggested ways of presenting content. Also features tips for special class and clinical activities. An extensive Test Bank with an answer key assists instructors in formulating test questions. Transparency masters of key illustrations supplement overhead transparencies. Student Review Sheets are included as an additional resource.

Overhead Transparencies

Packet includes 100 transparency acetates for classroom use. Important figures and diagrams have been chosen for inclusion in the packet.

CompuTest 3

Computerized Test Bank for use with IBM PC. Includes multiple-choice questions and a user's manual so that instructors can add, delete, or rearrange test items from any part of the text.

Student Learning Guide

Enables students to make maximum use of review time by presenting objectives, self-assessment activities, and decision-making tools.

ACKNOWLEDGMENTS

We are pleased to welcome Virginia L. Cassmeyer as a new editor. Dr. Cassmeyer has been a contributor to this book since the first edition. We are grateful for the expert contributions by our chapter authors. We thank the readers who wrote to us with ideas or suggestions and trust that they will be pleased with changes that have been made. New illustrations are the work of Nancy Burgard of Cleveland. The preparation of parts of the manuscript was by Sondra Patrizi.

We greatly appreciate the strong support we have received from editors and project managers at Mosby-Year Book, Inc., particularly Linda Duncan, Terry Van Schaik, Janet Livingston, and John Rogers. We could not have completed this third edition without them.

*Barbara C. Long
Wilma J. Phipps
Virginia L. Cassmeyer*

Contents

Unit One

Medical-Surgical Nursing Practice

1 *Perspectives of Medical-Surgical Nursing* 1

Barbara C. Long

- Scope of medical-surgical nursing 4
- Health and illness 4
 - Definitions of health 4
 - Health promotion and prevention 4
 - At risk status 5
 - Illness 6
 - Disease 6
 - Illness behavior and sick role 6
- Medical-surgical nursing practice 7
 - Types of nursing practice 7
 - Knowledge base 7
 - Frameworks for nursing practice 8
- Nursing process 8
 - Assessment 9
 - Data analysis: nursing diagnosis 9
 - Planning 12
 - Implementation 12
 - Evaluation 13
- Ethical dilemmas in medical-surgical nursing 13
- Summary 14

2 *Quality Management in Nursing* 16

Frances R. Chester

Mary Lou Monahan

- Impetus for quality management 17
 - Legislation 17
 - Third-party reimbursement 17
 - Economic factors 17
 - Professional standards 17
- Definition of quality management 18
- Quality management process 18
 - Steps in a quality management review 19
- Monitoring activities and instruments 22
 - Incident reports 22
 - Quality indicators (monitors or screens) 23
 - Nursing audit 23
 - Peer review 23
 - Patient satisfaction questionnaire 23
 - Staff satisfaction surveys 23
 - Utilization review 23
 - Infection control reports 23
- Ethical issues 23
 - Confidentiality and the quality management process 23

- Ethics and quality management 24
- Future trends 24
- Summary 24

Unit Two

Health Promotion and Illness Prevention

3 *Cultural Influences on Health and Illness* 29

Barbara J. Sibley

- Definitions of culture 30
- Cultural and biologic traits 30
- Purpose for learning about a person's culture 32
- Concepts of culture, ethnicity, nationality, and race 33
 - Toward cultural sensitivity 33
- Perceptions of illness and disease causation 35
 - Folk and traditional care 36
 - Predetermination 36
 - Germ theory of disease 37
 - Western biomedicine 37
 - Stress and the general adaptation syndrome 37
 - Behavioral and environmental factors 37
 - Discussion 38
- Cultural concepts applied to health and illness 38
 - Concept of self and world view 38
 - Symbols and meanings 38
 - Shame and face 38
 - Sick role and expectations from self and others 39
 - Gender identification and role 39
 - Direct nursing care factors 39
- Nursing attention to the cultural dimension 40
 - Making an assessment 40
 - Selecting nursing diagnoses 41
 - Planning care 41
 - Serving as advocate 41
- Examples of nursing care in specialized cultural settings 42
 - Frontier nursing service 42
 - Nursing homes 42
 - Services for the disabled 42
 - Hispanic populations 42
 - Communities in older, larger cities 42
 - Oriental populations 43
 - American Indian health center 43
- Impact of recent trends and social changes 43
 - Issues of access 43
 - Awareness 43
- Summary 43

4 *Promotion of Health in the Elderly* 46

Ruth Lincoln

- Concepts of aging 47
 - Theories of aging 47
 - Physiologic aging 47
 - Primary and secondary aging 47
 - Sexuality 48
 - Psychosocial aging 49
 - Intellectual function 49
 - Health problems 49
- Prevention and health education 51
 - Primary prevention 51
 - Secondary prevention 53
- MAJOR HEALTH PROBLEMS FOR THE ELDERLY 55
- Cognitive perceptual problems 55
 - Nursing Process 56
- Musculoskeletal problems 58
 - Nursing Process 58
- Cardiopulmonary problems 59
 - Nursing Process 59
- Gastrointestinal problems 60
 - Nursing Process 60
- Integumentary problems 62
 - Nursing Process 62
- Urinary problems 63
 - Nursing Process 63
- OTHER PHYSIOLOGIC PROBLEMS 64
- Dehydration 64
 - Nursing Process 64
- Pain 65
 - Nursing Process 65
- SPECIAL CONSIDERATIONS 65
- Sleep pattern disturbance 65
- Diagnostic tests 66
- Anesthesia and surgery 66
- Diabetes 66
- Psychosocial changes 66
 - General care 66
 - Discharge Planning 67
 - Terminating treatment 68
 - Patient self-determination act 68
 - Standards for geriatric nursing practice 69
- Summary 69

5 *Health Promotion: Nutrition and Exercise* 71

Barbara C. Long

- Health promotion in medical-surgical nursing practice 72
 - Factors affecting health-promoting behaviors 72
- Nutrition 74
 - Nutritional guidelines 74
 - Food-drug interactions 77
 - Nursing Process 77
- Exercise 83
 - Benefits of exercise 83
 - Exercise programs 83
 - Immobility 85
- Summary 86

6 *Stressors, Stress, and Stress Management* 88

Virginia L. Cassmeyer

Barbara C. Long

Mary Wykle

- Adaptation 89
- Stressors/stress as concepts 89
 - Stressors 89
 - Stress 90
- Responses to stressors 90
 - Integrated psychobiologic response 90
 - General adaptation syndrome 90
 - Neuroendocrine response to stressors 92
 - Coping 94
 - Defense mechanisms 95
 - Specific behavioral responses 96
- Nursing Process 98
- Summary 105

Unit Three

Common Problems Encountered in Medical-Surgical Nursing

7 *Fluid and Electrolyte Imbalances* 111

Mary Kay Lehman

Barbara Soltis

- Basic mechanisms of fluid and electrolyte balance 112
 - Body water 112
 - Body electrolyte component 112
 - Mechanisms for fluid and electrolyte movement 113
 - Hormonal control 115
- Fluid and electrolyte imbalance 115
 - Fluid imbalances 115
 - Electrolyte imbalances 120
- Assessment of fluid and electrolyte balance 125
 - Patient data 125
 - Laboratory values 126
 - Additional data 126
- Interventions for patients with fluid and electrolyte imbalance 127
 - Prevention of fluid and electrolyte imbalance 127
 - Replacement therapy 129
 - Relief of thirst 130
- Summary 131

8 *Acid-Base Imbalances* 132

Mary Kay Lehman

- Acid-base balance and imbalance 133
 - Regulation of acid-base balance 133
 - Types of acid-base disturbances 135
- Summary 138

9 *Shock* 139

Martha L. Allen

Gail Osterfield

- Etiology/epidemiology 140
 - Cardiogenic shock 140
 - Vasogenic shock 140

- Pathophysiology 141
 - Early stage 141
 - Late stage 142
- Organ damage 143
 - Kidneys 143
 - Brain 143
 - Heart 144
 - Lungs 144
 - Gastrointestinal tract 144
 - Liver 144
 - Blood 144
- Nursing Process* 144
- Summary 161

10 Pain 163

- Judith H. Watt-Watson*
- Barbara C. Long*
- Physiology of pain 164
 - Pain receptors and stimuli 164
 - Pain transmission 164
 - Pain modulation 164
 - Theories of pain transmission 164
- Pain experience 165
 - Pain perception 165
 - Meaning of pain 166
 - Response to pain 166
- Types of pain 167
 - General types of pain 167
 - Specific types of pain 168
- Nursing Process* 169
- Summary 179

11 Cancer 182

- Susan Moeller Schneider*
- Rosemarie M. Hogan*
- Definition of terms 183
- Attitudes toward cancer 183
- Epidemiology 183
 - Epidemiologic variables for cancer 183
 - Nurse's role in cancer epidemiology 185
- Etiology: carcinogenesis 185
 - Host susceptibility 185
 - Environmental factors 187
 - Health practices 188
 - Viruses 190
 - Psychosocial factors 190
- Conclusions 190
- Pathophysiology 190
 - Characteristics of malignant cells 190
 - Naming and classifying neoplasms 192
 - Physiologic changes with aging 194
- Prevention and health education 195
 - Primary prevention 195
 - Secondary prevention 196
 - Tertiary prevention 197
 - Factors that interfere with health-seeking behaviors 197
 - Unproven methods of cancer management 197
 - Organizations involved in cancer education, detection, and rehabilitation 198
- Nursing Process* 198
- Summary 226

12 Sleep Disorders 228

- Diane Broadbent Friedman*
- Introduction to sleep problems 229
 - Aspects of normal sleep 229
 - Normal sleep function 229
 - Nature of sleep problems 229
- Parasomnias or disorders of arousal 230
 - Sleepwalking 230
 - Sleep terror 231
 - Familial sleep paralysis 231
 - Penile erections 231
- Insomnia 231
 - Etiology/epidemiology 231
 - Prevention 232
 - Pathophysiology 232
 - Clinical manifestations 232
 - Medical management 232
 - Nursing Process* 232
- Narcolepsy 236
 - Epidemiology 236
 - Etiology 236
 - Prevention 236
 - Characteristics of the episodes 236
 - Pathophysiology 236
 - Clinical manifestations 237
 - Medical management 237
 - Nursing Process* 237
- Sleep apnea 238
 - Etiology 238
 - Prevention 239
 - Pathophysiology 239
 - Clinical manifestations 240
 - Medical management 240
 - Nursing Process* 240
- Clinical chronobiology: the development of a new area of science 241
- Summary 242

13 Substance Abuse 244

- Elizabeth Schenk*
- Prevention and health education 245
 - Primary prevention 245
 - Secondary prevention 245
 - Tertiary prevention 246
- Alcoholism 246
 - Pathophysiology 247
 - Fetal alcohol problems 248
 - Alcohol withdrawal 248
 - Wernicke-Korsakoff's syndrome 248
 - Nursing Process* 249
- Drug abuse 255
 - Stimulants 256
 - Depressants 258
 - Hallucinogens 260
 - Phencyclidine 260
 - Narcotics 261
 - Cannabis 262
 - Deliriants 262
 - Nursing Process* 263
- Impaired nurses 269
- Codependency 269

- Focus on the future 269
 - Goals for the year 2000 269
- Summary 270

14 *Chronic Illness* 273

- Wilma J. Phipps
- Definition of acute and chronic illness 275
- Impact of chronic illness on society 276
 - Factors that influence chronic illness 276
 - Cost of disability 277
- Chronically ill persons and their families 278
 - Compliance and noncompliance 278
 - Prevention of chronic illness 279
- Nursing Process* 280
- Rehabilitation 283
 - Interdisciplinary approach 285
 - Rehabilitation centers 286
 - Role of the patient in rehabilitation 288
 - Role of the nurse in rehabilitation 288
- Continuing care 289
 - Self-help groups 289
 - Facilities for continuing care 290
 - Role of the nurse in continuing health care 291
- Focus on the future 292
 - Americans with Disabilities Act 292
 - Center for medical rehabilitation research 292
 - Health care goals for the year 2000 293
 - Management system for persons with chronic conditions 294
- Summary 295

15 *Loss, Dying, and Death* 297

- Sally M. Featherstone
- Understanding loss 298
 - Basic assumptions 298
 - Categories of loss 298
 - Factors influencing loss 299
- Dying and death 301
- Grief, mourning, and bereavement 301
 - Basic tasks of grief 302
 - Complicated mourning/dysfunctional grieving 302
- Nursing Process* 303
- Summary 310

Unit Four

Infection

16 *Biologic Defense Mechanisms* 315

- E. Ronald Wright
- Concept and scope of biologic defense 316
 - Concept of self versus nonself 316
 - Recognition of self from nonself 317
 - Scope of defense mechanisms 318
- External nonspecific defense mechanisms 318
 - Anatomic structures and mechanical actions 318
 - Biochemical factors 318
 - Microbial antagonism 319

- Internal nonspecific defense mechanisms 320
 - Reticuloendothelial system 320
 - Blood 320
 - Interferons 322
 - Inflammatory response 323
- Specific defense mechanisms 325
 - Concept of specific immunity 325
 - Basic design of the system 325
 - Immune response system 325
 - Developmental aspects of the immune response 332
 - Development of immune tolerance 333
 - Neuroendocrine factors influencing immune response 333
- Applications and implications of immune response 334
 - Concept of immunity 334
 - Immunization 334
 - Cancer immunology 336
 - Immunologic disorders 336
 - Monoclonal antibodies 337
 - Tissue transplants 337
- Summary 338

17 *Infection Control* 340

- Grace A. Rotter
- Dora Rice
- Elizabeth Cameron Eckstein
- Historical perspective 341
- The infectious disease process 341
 - Definitions 341
 - Chain of infection 341
 - Assessment 343
 - Diagnostic tests 344
- Infection control in the community 345
 - Prevention and control measures 345
 - Immunization programs 346
- Infection control in the hospital 349
 - Scope of the problem 349
 - Persons at risk 350
 - Pathogens causing nosocomial infections 350
 - Prevention and control measures 351
- Summary 358

18 *Sexually Transmitted Diseases* 360

- Wilma J. Phipps
- Etiology/epidemiology 361
- Sexual transmission 362
 - Prevention and health education 363
- Current needs 363
- Goals for the future 364
- Signs and symptoms 365
- Medical therapy 365
 - Nursing Process* 365
- Gonorrhea 368
 - Etiology, epidemiology, and pathophysiology 368
 - Prevention and health education 369
 - Signs and symptoms 370
- Nursing Process* 370
- Syphilis 371
 - Epidemiology, etiology, and pathophysiology 371
 - Prevention and health education 372

- Signs and symptoms 372
- Assessment 372
- Implementation 373
- Evaluation 373
- Herpes genitalis 373
 - Etiology, epidemiology, and pathophysiology 373
 - Prevention and health education 374
 - Assessment 374
 - Implementation 374
- Chlamydial infection 375
 - Etiology/epidemiology 375
 - Pathophysiology 375
 - Prevention and health education 375
 - Assessment 376
 - Implementation 376
- Lymphogranuloma venereum 376
 - Etiology/epidemiology 376
 - Pathophysiology 376
 - Assessment 377
 - Implementation 377
- Chancroid 377
 - Etiology/epidemiology 377
 - Pathophysiology 377
 - Assessment 377
 - Implementation 378
- Granuloma inguinale (Donovanosis) 378
 - Etiology/epidemiology 378
 - Assessment 378
 - Implementation 378
- Trichomoniasis 378
 - Etiology, epidemiology, and pathophysiology 378
 - Assessment 379
 - Implementation 379
- Bacterial vaginosis (gardnerella vaginalis) 379
 - Etiology 379
 - Assessment 379
 - Implementation 379
- Human papilloma virus (genital warts) 379
 - Etiology, epidemiology, and pathophysiology 379
 - Assessment 379
 - Implementation 379
- Hepatitis B 380
 - Etiology/epidemiology 380
 - Prevention and health education 380
- Other sexually transmitted diseases 380
- Summary 380

19 Management of Person with HIV Infection and AIDS 383

Denise M. Kresevic

- Epidemiology and prevention 384
 - Virus transmission and risk behaviors 384
 - Infection control measures 385
- Pathophysiology 385
 - Mechanism of HIV infection 385
 - HIV infection continuum and clinical manifestations 386
- Nursing Process 387
- HIV COMPLICATIONS: AIDS 394
- Pneumocystis carinii* pneumonia 394
- Candida* infections 396
- Cryptosporidiosis 396

- Herpesvirus infections 397
 - Cytomegalovirus infection 397
 - Herpes zoster 397
 - Herpes simplex 397
- Mycobacterial infections 397
- Central nervous system infections 397
- Tumors 398
- Drug therapy 398
- SOCIAL, ETHICAL, AND LEGAL ISSUES 402
- Summary 402

Unit Five

Perioperative Nursing

20 Preoperative Intervention 409

Carole G. Phipps
Barbara C. Long

- Elective admission for surgery 410
 - Ambulatory surgery 410
 - Same-day surgery 410
 - Early hospital admission 410
- Types of surgery 410
 - Classification 410
 - Surgical procedures 411
- Effects of surgery on the patient 411
 - Physiologic responses 411
 - Psychologic responses 413
 - Elderly persons' response to surgery 413
- Risk factors for surgery 413
 - Age 413
 - Nutrition 413
 - Neuroendocrine response ineffectiveness 414
 - Chronic disease 414
 - Smoking 414
- Informed consent 414
 - Nursing Process 415
- Transportation to operating room 423
- Summary 423

21 Intraoperative Intervention 425

Mary Jo Boehnlein

- Concepts basic to perioperative nursing 426
 - Perioperative nursing 426
 - Standards of perioperative nursing practice 426
- Intraoperative patient care team members 426
 - Operating team 426
 - Other personnel 429
- Design of the surgical suite 429
 - Traffic control 429
 - Infection control 429
 - Environmental conditions 429
 - Communication system 429
- Aseptic technique and infection control 430
 - Basic rules of surgical asepsis 430
 - Infection control practices for operating room personnel 432
 - Patient skin preparation 436
 - Sterile draping 437

- Safety and protection of the patient 437
 - Admission of patient to operating room 437
 - Transferring and positioning patient for surgery 438
- Anesthesia 440
 - Patient preparation 442
 - General anesthesia 442
 - Malignant hyperthermia 444
 - Regional anesthesia 444
 - Intravenous conscious sedation 445
 - Monitoring the patient 445
 - Electrical hazards 446
- Completion of surgery 446
 - Dressings and drains 446
 - Documentation 447
- Transfer of patient to postanesthesia care unit 447
- Summary 447

22 *Postoperative Intervention* 449

- Barbara C. Long
- Postanesthetic phase 450
 - Nursing Process 450
 - Discharge from PACU 453
- Admission of patient to clinical unit 453
 - Preparation on clinical unit 453
 - Nursing Process 454
- Discharge planning 472
- Summary 473

Unit Six

Gas Transport Problems

23 *The Patient with Nose and Throat Problems* 477

- Wilma J. Phipps
- Anatomy and physiology 478
 - Nose and sinuses 478
 - Upper throat: pharynx and tonsils 478
 - Lower throat: larynx and hypopharynx 479
- MAJOR HEALTH PROBLEMS OF THE NOSE AND THROAT 480
- INFLAMMATIONS OF THE NOSE AND SINUSES 480
 - Etiology 480
 - Pathophysiology 480
- INFECTIONS OF THE NOSE AND SINUSES 480
- Rhinitis 481
 - Etiology/epidemiology 481
 - Interventions 482
- Sinusitis 482
 - Etiology/epidemiology 482
 - Acute suppurative sinusitis 483
 - Subacute suppurative sinusitis 484
 - Chronic suppurative sinusitis 484
 - Nursing Process 485
 - Complications of sinusitis 486
 - Surgery of the sinuses 486
- INFECTIONS OF THE PHARYNX AND LARYNX 489

- Acute pharyngitis 489
 - Etiology/epidemiology 489
 - Pathophysiology 489
 - Interventions 489
- Acute follicular tonsillitis 490
 - Etiology/epidemiology 490
 - Interventions 490
 - Tonsillectomy 490
- Laryngitis 490
 - Simple acute laryngitis 490
 - Chronic laryngitis 490
- OBSTRUCTIVE DISORDERS OF THE NOSE 491
 - Pathophysiology 491
- Nasal polyps 491
 - Pathophysiology 491
 - Interventions 491
- Hypertrophy of the turbinates 491
- Fractures of nasal bones and septum 492
- Fractures of maxillary and zygomatic bones 492
 - Nursing Process 492
- MALIGNANCIES OF THE NOSE AND THROAT 495
 - Pathophysiology 495
- Malignancy of sinuses 495
 - Maxillectomy and orbital exenteration 496
- Malignancy of tonsils 496
 - Etiology/epidemiology 496
 - Pathophysiology 496
 - Medical treatment 496
- Malignancy of larynx 496
 - Etiology/epidemiology 496
 - Pathophysiology 496
 - Diagnostic tests 496
 - Surgery of the larynx 497
 - Nursing Process 502
- Summary 507

24 *The Patient with Pulmonary Problems* 510

- Wilma J. Phipps
- Anatomy and physiology of the respiratory tract 511
 - Upper airway 511
 - Lower airway 512
 - Physiologic changes with aging 517
- Physical examination of the chest 517
 - Inspection 517
 - Palpation 519
 - Percussion 519
 - Pulmonary auscultation 519
- Diagnostic tests 522
 - Roentgenologic examination of the thorax and lungs 522
 - Roentgenologic examination of ventilation and perfusion 523
 - Examination of sputum 523
 - Skin testing 524
 - Pulmonary function tests 525
 - Arterial blood gas analysis 527
 - Endoscopic examination 528
 - Thoracentesis 529
- Prevention and health education 529
 - Primary prevention: prevention of disease 530
 - Secondary prevention: early detection 530

MAJOR HEALTH PROBLEMS OF THE RESPIRATORY SYSTEM	530
INFECTIOUS DISEASES: VIRAL DISEASES OF THE RESPIRATORY TRACT	531
Acute bronchitis	531
Etiology/epidemiology	531
Nursing Process	531
INFECTIOUS DISEASES: BACTERIAL DISEASES OF THE RESPIRATORY TRACT	535
Pneumonia	535
Etiology/Epidemiology	535
Pathophysiology	535
Typical or classic pneumonia	537
Atypical pneumonia	537
Aspiration pneumonia	537
Hematogenous pneumonia	538
Nursing Process	538
Tuberculosis	542
Etiology/epidemiology	542
Pathophysiology	543
Classification of tuberculosis	543
Primary and secondary prevention	544
Diagnostic tests	545
Nursing Process	546
INFECTIOUS DISEASES: FUNGAL INFECTIONS OF THE RESPIRATORY TRACT	548
Histoplasmosis	548
Etiology	548
Pathophysiology	548
Coccidioidomycosis	549
Etiology	549
Pathophysiology	549
Blastomycosis	550
Etiology	550
Pathophysiology	550
Nursing Process	550
Occupational lung diseases	551
Etiology/epidemiology	551
Prevention	555
Adult respiratory distress syndrome	555
Etiology/epidemiology	555
Prevention	556
Pathophysiology	556
Clinical manifestations	556
Medical management	557
Nursing Process	557
Cancer of the lung	558
Etiology/epidemiology	558
Prevention	561
Pathophysiology and clinical manifestations	561
Medical management	562
Thoracic surgery	563
Nursing Process	569
Chest trauma	576
Etiology/epidemiology	576
Prevention	576
Chest cage injuries: rib fractures	576
Pathophysiology	576
Medical management	576
Nursing Process	576
Flail chest	577
Pathophysiology	577
Assessment	577
Medical management	577
Penetrating chest wounds	578
Pathophysiology	578
Assessment	578
Medical management	579
Pneumothorax	579
Pathophysiology	579
Nursing Process	579
CHRONIC OBSTRUCTIVE PULMONARY DISEASE	581
Etiology/epidemiology	581
Chronic bronchitis	582
Etiology/epidemiology	582
Prevention	582
Pathophysiology	583
Clinical manifestations	583
Medical management	584
Nursing Process	586
Emphysema	587
Etiology/epidemiology	587
Primary prevention	587
Pathophysiology	587
Clinical manifestations	588
Medical management	588
Nursing Process	588
Asthma	603
Etiology/epidemiology	603
Prevention	603
Pathophysiology	604
Clinical manifestations	605
Medical management	605
Maintenance therapy	605
Nursing Process	606
Cystic fibrosis	609
Etiology/epidemiology	609
Prevention	610
Pathophysiology	610
Clinical manifestations	610
Diagnostic tests	611
Medical management	611
Complications and their management	611
Nursing Process	612
Respiratory failure	614
Research	614
RESPIRATORY INSUFFICIENCY AND RESPIRATORY FAILURE	615
Etiology/epidemiology	615
Pathophysiology and clinical picture	615
Interventions	615
Mechanical ventilation	623
Summary	627

25 *The Patient with Cardiovascular Problems* 631

Terri Abraham
Mary A. (Sandy) Wyper

Anatomy and physiology	632
Basic structure of the heart	632
Cardiac cycle	636
Cardiac output	638
Physiologic changes with aging	638

Cardiac auscultation	639
First and second heart sounds	639
Extra heart sounds	641
General directions for cardiac auscultation	641
Cardiac dysrhythmia	641
Detection of cardiac rhythms	641
Normal sinus rhythm	646
Arrhythmogenic mechanisms	646
Types of dysrhythmias	646
Treatment modalities	655
MAJOR HEALTH PROBLEMS OF THE HEART	661
CORONARY ARTERY DISEASE	661
Pathophysiology	661
Risk factors	662
Angina pectoris	663
Etiology	663
Pathophysiology	663
Nursing Process	664
Myocardial infarction	667
Etiology	667
Pathophysiology	667
Nursing Process	668
Cardiac surgery for myocardial ischemia	672
Coronary artery bypass graft	672
Percutaneous transluminal coronary angioplasty	675
Intravascular stenting	676
Laser therapy for cardiovascular disease	676
CONGESTIVE HEART FAILURE	676
Etiology	676
Pathophysiology	677
Nursing Process	678
Pulmonary edema	684
Cardiogenic shock	687
INFLAMMATORY HEART DISORDERS	688
Pericarditis	689
Myocarditis	690
Endocarditis	690
Rheumatic heart disease	690
Cardiovascular syphilis	690
TOXIC HEART DISORDERS	691
Alcoholic cardiomyopathy	691
Cardiovascular effects of cocaine abuse	691
VALVULAR HEART DISEASE	691
Pathophysiology	691
Nursing Process	693
Surgical intervention	697
ANEURYSMS	698
Pathophysiology	698
Diagnostic tests	699
Surgery	699
Summary	701

26 The Patient with Peripheral Vascular Problems 705

Eileen Walsh

Anatomy and physiology	706
Arteries	706
Capillaries	706
Veins	706

Lymphatics	706
Physiologic changes with aging	708
Prevention and health education	709
Primary prevention	709
Secondary prevention	709
MAJOR HEALTH PROBLEMS OF THE PERIPHERAL VASCULAR SYSTEM	709
ARTERIAL DISORDERS	709
Obstructive arterial disorders	710
Etiology/epidemiology	710
Pathophysiology	711
Nursing Process	713
Surgery	717
Vasomotor arterial disease—Raynaud's phenomenon/disease	724
Etiology/epidemiology	724
Pathophysiology	724
ARTERIOVENOUS FISTULA	726
Etiology	726
Pathophysiology	726
Interventions	726
VENOUS DISORDERS	726
Thrombophlebitis	726
Etiology/epidemiology	726
Pathophysiology	726
Nursing Process	726
Varicose veins	729
Etiology/epidemiology	729
Prevention	729
Pathophysiology	729
Diagnostic tests	729
Interventions	729
LEG ULCERS	730
Etiology	730
Pathophysiology	730
Nursing Process	731
LYMPHEDEMA	732
Etiology	732
Pathophysiology	732
Nursing Process	732
HYPERTENSION	733
Etiology/epidemiology	733
Prevention	734
Pathophysiology	734
Nursing Process	736

27 The Patient with Hematologic Problems 743

Kathryn Sabo Thompson
Rosemarie M. Hogan

Anatomy and physiology	744
Components of the hematopoietic system	745
Physiologic changes with aging	746
Prevention and health education	747
Primary prevention	747
Secondary prevention	747
MAJOR HEALTH PROBLEMS RELATED TO BLOOD AND LYMPH SYSTEMS	747
DISORDERS ASSOCIATED WITH ERYTHROCYTES	747
Anemia	747
Etiology	747
Pathophysiology	749
Nursing Process	751

Sickle cell anemia	754
Etiology/epidemiology	754
Pathophysiology	754
Nursing Process	755
Erythrocytosis (polycythemia)	760
Etiology and pathophysiology	760
Nursing Process	760
COAGULATION DISORDERS	760
Pathophysiology	760
Thrombocytopenia	761
Etiology	761
Pathophysiology	762
Assessment	762
Implementation	762
Hemophilia	762
Etiology and pathophysiology	762
Assessment	762
Implementation	763
Disseminated intravascular coagulation	764
Etiology	764
Pathophysiology	764
Assessment	764
Implementation	764
DISORDERS ASSOCIATED WITH WHITE BLOOD CELLS	765
Neutropenia (leukopenia)	765
Neutrophilia	766
Leukemia	766
Etiology	766
Pathophysiology	766
Classification	766
Nursing Process	767
DISORDERS ASSOCIATED WITH THE LYMPHATIC SYSTEM	769
Lymphadenopathy	769
Lymphomas	770
Etiology and pathophysiology	770
Nursing Process	770
Multiple myeloma	772
Etiology and pathophysiology	772
Assessment	772
Implementation	772
Summary	773

Unit Seven

Metabolic and Endocrine Problems

28 The Patient with Diabetes Mellitus 777

Dorothy Blevins	
Virginia L. Cassmeyer	
Anatomy and physiology	778
Hormonal regulation of blood glucose	778
Anatomy	778
Physiology	778
Physiologic changes with aging	779
Classification of diabetes mellitus	779
Prevention and health education	780
Primary prevention	780

Secondary prevention: detection of diabetes mellitus	781
Tertiary prevention	782
Etiology/epidemiology	783
Pathophysiology	785
Hyperglycemia	785
Cellular starvation	785
Insulin resistance	785
Hyperosmolality	785
Hyperglycemic, hyperosmolar, nonketotic coma (HHNC)	786
Diabetic ketoacidosis (DKA)	786
Macrovascular changes	787
Microvascular changes	788
Nephropathy	788
Diabetic retinopathy	789
Neuropathy	790
Lower extremity changes	790
Nursing Process	792
Summary	818

29 The Patient with Endocrine Problems 821

Virginia L. Cassmeyer	
Dorothy Blevins	
Anatomy and physiology	822
Hormonal regulation	822
Receptor activity	823
Hypothalamus	823
Pituitary gland	823
Adrenal gland	825
Parathyroid gland	826
Thyroid gland	828
Physiologic changes with aging	828
Prevention and health education	829
Primary prevention	829
Secondary prevention	829
Tertiary prevention	829
MAJOR HEALTH PROBLEMS OF THE ENDOCRINE SYSTEM	830
ANTERIOR PITUITARY DYSFUNCTION	830
Hypersecretion	830
Etiology/epidemiology	830
Pathophysiology	831
Hyposecretion	833
Etiology/epidemiology	833
Pathophysiology	833
Nursing Process	833
POSTERIOR PITUITARY DYSFUNCTION	838
Hyposecretion of antidiuretic hormone	838
Etiology	838
Pathophysiology	838
Hypersecretion of antidiuretic hormone	839
Etiology	839
Pathophysiology	839
Nursing Process	839
ADRENAL GLAND DYSFUNCTION	841
Hypersecretion	841
Cortisol excess	841
Aldosterone excess	843
Androgen excess	843
Catecholamine excess	844

- Hyposecretion 844
 - Adrenocortical insufficiency 844
 - Addisonian crisis (adrenal crisis) 845
- Nursing Process 845
- PARATHYROID DYSFUNCTION 851
- Parathyroid hormone (PTH) excess 851
 - Etiology 851
 - Pathophysiology 851
- Parathyroid hormone (PTH) deficiency 852
 - Etiology 852
 - Pathophysiology 852
- Nursing Process 852
- THYROID DYSFUNCTION 856
- Goiter 857
- Thyroiditis 857
- Hypothyroidism 857
 - Etiology 857
 - Pathophysiology 857
- Hyperthyroidism 858
 - Etiology 858
 - Pathophysiology 859
- Nursing Process 860
- Summary 868

30 The Patient with Hepatic Problems 871

- Virginia L. Cassmeyer
- Dorothy R. Blevins
- Anatomy and physiology 873
 - Carbohydrate, protein, and fat metabolism 873
 - Production of bile salts 874
 - Bilirubin metabolism 874
 - Detoxification 875
 - Storage of minerals and vitamins 875
 - Blood reservoir 875
 - Protection 875
 - Physiologic changes with aging 875
- Prevention and health education 875
 - Primary prevention 875
 - Secondary prevention: detection of disease 877
- MAJOR HEALTH PROBLEMS OF THE HEPATIC SYSTEM 877
- DIFFUSE HEPATOCELLULAR DISORDERS 877
- Common manifestations of diffuse hepatocellular disorders 877
- Cirrhosis of the liver 879
 - Etiology/epidemiology 879
 - Pathophysiology 879
- Hepatitis 884
 - Toxic hepatitis 884
 - Viral hepatitis 885
 - Chronic hepatitis 891
- FOCAL HEPATOCELLULAR DISORDERS 891
- Liver abscess 891
 - Etiology/epidemiology 891
 - Pathophysiology 891
- Trauma to the liver 891
 - Etiology/epidemiology 891
 - Pathophysiology 891
- Tumors of the liver 892
 - Etiology/epidemiology 892
 - Pathophysiology 892

- Nursing Process 892
- Summary 911

Unit Eight

Problems with Digestion or Elimination

31 The Patient with Gastrointestinal Problems 917

Barbara C. Long
Rebecca Roberts

- Anatomy and physiology 918
 - Mouth and esophagus 918
 - Stomach 918
 - Intestines 918
 - Physiologic changes with aging 920
- Prevention and health education 921
 - Primary prevention: prevention of disease 922
 - Secondary prevention: early detection 922
- MAJOR HEALTH PROBLEMS OF THE GASTROINTESTINAL SYSTEM 923
- Classification by general function 923
 - Disorders of motility 923
 - Disorders of digestion and absorption 923
 - Obstructive disorders 923
- Classification by specific function 923
- NUTRITIONAL EXCESS AND DEFICIT 924
- Obesity 924
 - Etiology 924
 - Pathophysiology 924
 - Interventions 924
- Protein-calorie malnutrition 926
 - Etiology 926
 - Pathophysiology 926
 - Nursing Process 926
- INGESTIVE DISORDERS 931
- Vomiting 931
 - Pathophysiology 931
 - Assessment 931
 - Implementation 931
- Inflammatory disorders of the mouth 931
 - Etiology 931
 - Pathophysiology 931
 - Nursing Process 932
- Cancer of the mouth 933
 - Epidemiology 933
 - Pathophysiology 933
 - Prevention and health education 934
 - Nursing Process 934
- Common esophageal disorders 936
 - Etiology and pathophysiology 937
 - Nursing Process 938
- Cancer of the esophagus 939
 - Epidemiology 939
 - Pathophysiology 939
 - Implementation 939
- Esophageal surgery 939
 - Preoperative care 939
 - Postoperative care 940